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Original Articles.

SOME OBSERVATIONS ON THE CAUSE, PREVENTION, AND TREATMENT OF INTERMITTENT MALARIAL FEVER.

BY LUTHER SEXTON, M.D.,

NEW ORLEANS.

MALARIA, literally translated, means bad air. By malarial disease is meant the sum of clinical phenomena observed in persons subjected to this bad air. (I am not sure but that bad water has as much to do with its production as bad air.) The element that makes this air or water bad is what the pathologists of to day are striving to attain. A short review of their discoveries and conclusions may not be out of place or uninteresting to your readers.

As far back as 1879 Klebs and Tomasi found in the air, soil and water of the Pontine marshes micro-organisms of cocci, algæ, and bacteria. These spores were cultivated, and, when injected into the veins of animals, produced fever. Thousands of other products injected into the veins are capable of producing the same result. Animals living in these marshes were not known to be subjected to malarial fever, so nothing scientific was proven at last by these experiments.

The anæmia of the malarial patient led Laveran to examine the red blood corpuscles. Attached to these he found cystic and mobile parasitic pigmented bodies, sometimes larger, again smaller, than the red blood corpuscles. These parasites possess ameboid movement. Flagella were also found with granules in the center; regular segmented rosettes were found in the blood.

Celli in 1883 announced malaria to be due to a plasmodium malaria or microbe and protoplasmic bodies. The action of these bodies upon hæmoglobin cause reddish or black pigment; he proved that in transfusion of blood from a malarial to

a healthy patient the result was malarial fever, the same bodies being found in the infected subject.

Reproduction in these micro-organisms takes place by segmentation. Cultures of the plasmodium failed to produce malaria, though the micro cocci were found in the culture fluid. This plasmodium, by later investigation, has been considered a result of Crudeli's or Lavaran's bacillus. While it may not be the cause, it is always an accompaniment of the disease in its different types. This plasmodium should be carefully looked for in every case where there is a doubt in the mind as to whether we have to deal with malaria or typhoid fever.

A significant fact in connection with this micro-organism is that the nearer the chill-time we examine the blood, the more prolific we find the bacilli. Five hundred to six hundred diameters shows this germ very readily.

Warmth and moisture are essential to their development, and the soil around swamps and marshes seems to be their natural habitat.

Professor Joseph Jones, of New Orleans, La., has distinctly shown, as early as 1870, that the main lesions in malarial subjects begin in the blood; the blood distributes the infection to other organs which become secondarily affected. The con-current testimony of all pathological investigators, while they may differ as to the cause, recognize the first break to be in the blood either as (1) amœba in white blood corpuscles; (2) pigments in red blood corpuscles; (3) large solid bodies in interior of red blood corpuscles; (4) pigmented crescents developed in interior of red blood corpuscles; (5) rosettes form; (6) scattered small bodies, result of segmentation; (7) flagellate organs containing pigments; (8) pigmented granular bodies one-quarter to one half size of red blood corpuscles.

After the induction of any of these organisms into the body, we have a period of incubation usually of about two weeks before the disease manifests itself; occasionally, though, only as many days.

The immediate effect of the poison from the malaria is first its destruction of the red blood corpuscles, an increase in pigment; irritative changes are set up in the liver, spleen, and stomach; nerves begin to cry out from being fed by the impure blood, and innumerable neuralgias and splenic pains are the result. Of all the tissues of the body, the liver and spleen seem to be the most affected by these blood changes. The pigmentary deposit in them sets up a hyperplasia or hypertrophy which becomes chronic; after a time anæmia or hydræmia is a final result of this poisonous action upon the blood and system.

While the true cause of malaria is not positively known to be any of the germs we have referred to, and our absolute knowledge on the subject is very meager, we are more certain about conditions which regulate its production and spread—a certain amount of decaying vegetable matter, either on the surface or in the soil.

Moisture and an average degree of temperature, above 60 F., is essential to the production of malaria. There is not much to be dreaded from swamp, or marshy country, constantly submerged with either fresh or salt water, but when such places are dried out by the direct rays of the sun, or where they are filled with partly fresh and partly salt water, the miasm seems to be great. Low, bottom lands that are subjected to overflow, as well as new cultivated fields recently cleared of their swampy growth, railroad excavations, canal work, and anything that disturbs the soil when there is sufficient warmth and moisture is liable to generate a malarial poison, which affects the exposed inhabitants. Rivers have been known to carry malaria in their water for a considerable distance; it is also air borne, and may be carried by the wind great distances.

The poison is quite ponderable, as proven by its being carried four miles to the crew of a ship anchored that distance from the coast where malaria was prevailing, thus infecting the passengers upon the vessel.

The above mentioned are the conditions which are helpful to the propagation of the fever. Circumstances which are inimical to its production are high latitudes. It is rarely found beyond 63° north, and 37° south latitude. The poison is rarely developed above an altitude of one thousand feet above the level of the sea. Good drainage is an essential factor in the eradication of malaria. Cold acts as beneficially in preventing malaria, as it does yellow fever, and whenever the freezing point is reached, even for one night, there is an end to existing malaria; when the thermometer reaches 60° F. it may be de-

veloped again. The poison is most virulent between the suns; night air should be avoided in malarial climates. The malarial poison most likely enters the system either through the respired air, or through foul drinking water, or bad food. After introduction into the system it is capable of reproduction.

Weak, anæmic patients are more liable to the influence of the poison than stronger ones. Women and children are hence more liable to have it than men, when equally exposed. One attack predisposes to another; change of location from a swamp to a hill country is as liable to bring out the latent malaria, as a move from hill to a malaria region would be. The remarkable exemption of residents of New Orleans from malarial fever seems strange, yet it is true. It would seem that New Orleans would be the hot bed for its propagation, yet the facts are that we are remarkably exempt from acute malarial fevers here. The paved condition of the streets, the open gutters to ventilation, sunlight, rain and flushing may have the effect of destroying the poison, or preventing its rising from the soil. Pavement would seem to act better in this way than the green sod, which we know to be antagonistic to the production of malaria. Our open gutters are also greatly in our favor. That New Orleans is practically exempt from regular chills and fevers may not be generally known, still it is true.

The faculty in Tulane University have to depend upon cases imported from the country to teach the medical classes that assemble here annually, the clinical history of intermittent fever. Other types of malarial fever seem to be more common here. The absorption of the poison by the sunflower and the eucalyptus tree are myths handed down from our ancestors, like many other medical superstitions, and are without foundation, either in fact or reason.

The natural propylaxis which would suggest itself to persons going into malarial climate would be to keep indoors after sundown; never to go out upon an empty stomach; not to drink the water of malarial regions till it is filtered or boiled; not to drink alcoholic stimulants, or to eat rich, indigestible food in great quantities, as both congest the liver and irritate the stomach, rendering the subject much more liable to the action of the malarial poison. The highest and best drained point, in any given location, should be selected for residences. As quinine is the best agent with which to break the fever, small tonic, 3-grains doses, three times a day is the most effectual way of keeping it off.

The treatment of malaria cannot be summed up in the giving of quinine of some authors, for your quinine, unless given in the proper way and at the right time, is more apt to act as an emetic than a specific.

We must view the pathological state of engorgement and congestion of the spleen and liver, brought about by the action of the poison. The first rational object in the plan of treatment is to relieve this engorgement, which is usually accomplished by 2½ grains each of calomel and soda, night and morning, followed by saline purge. It is rarely necessary to exceed this dose, though in obstinate cases it might be doubled, but the days of 20 and 60 grain doses of calomel are numbered, much to the credit of the profession. Every patient should be asked before give ing calomel, "Have you ever been salivated?" If yes, we should resort to compound cathartic or some other vegetabl pill, or laxative, and not run the risk of a repetition of the disagreeable experience of salivation. Free purgation in the beginning is absolutely necessary, and if one course of medicine does not accomplish this, it should be repeated. Flushing the rectum with hot glycerine and boracic acid solutions aid the action of purgation very much.

To mitigate the chill stage or to try to abort it, you can use 30 drops of chloroform in milk, a dose of morphine and atropia, either internally or hypodermically. A warm mustard or salt water emetic during this stage clears the stomach of any objectionable contents and brings about a general relaxation. The next symptom to combat is pyrexia. Sponging with cold or tepid water is very grateful. The evaporation of water left on the surface consumes considerable of latent heat. The head should be enveloped in several thicknesses of towels, wrung out of ice water, or internally—

℞.—Tr. aconiti..... gtt.xvj.
Spts. nitre..... ℥j.
Syr. scillæ..... ℥j.
M.—S. Teaspoonful every hour or two for adults,

is an old but reliable combination.

Newer remedies on this line belong to the coal-tar group; one is about as efficacious as the other. Five to 10-grain doses of acetanilide, with same amount of bicarb. soda, repeated as often as necessary. Perhaps 10 to 15 grain doses of antipyrine or phenacetine might act a little more promptly. These remedies are best given in whiskey or brandy. As soon as the temperature falls and the pain ceases these agents should also be stopped. It is beneficial to combine them in equal parts, to be given with the quinine in capsules. This plan allows you to begin the quinine earlier, prevents the disagreeable head symptoms, and helps to control the splenic and other neuralgias. After caring for your patient this far, the matter of keeping the next paroxysm off is important, for in the ordinary malarial fever we ought not to allow our patients to have the second chill. Quinine is our sheet-anchor here, and if you can get the bowels well opened, and the adult patient to absorb 20 or 30 grains of quinine sulphate before the next paroxysm, it is pretty sure not to return. Irritability of the stomach and non-absorption of the remedy, or the substitution by our druggist of some of the weaker alkaloids, an imprudence of the patient is the cause of our failure.

The yellow or greenish viscid secretion of the stomach commonly known in these attacks must be vomited before you can secure the good effect of any remedy. A 10-grain dose of the quinine as soon as the sweating stage commences ought to be given, as it helps to eliminate the poison; this followed up by a 5-grain capsule, so as to get in the 30 grains before the next chill. If the stomach is too irritable to retain it, double the amount, by the rectum, suspended in milk or cream acts as well; or one-half the dose used as hypodermic solutions, in ether, if it can neither be kept by the rectum nor mouth. The liability to form abscess is not so great after the ether as the acid solution of quinine. In the pernicious variety, or where you see the patient only an hour or two before the chill is expected, this is a prompt method of bringing him immediately under the influence of the drug. As between large and small doses, I would prefer the latter; 5 grains of quinine in the simple intermittent. Our use of quinine is empirical, as we do not know how it acts. It is as near a specific in this disease as we have in medicine. Salicine, piperine, strychnine, arsenic, and many other drugs, have been recommended in malaria. I consider them all inferior to quinine, to act better as tonics, and in the masked or chronic forms, than as specifics in the inter and remittent variety.

When quinine is not borne well, we might try some other alkaloid of the bark. Piperine is occasionally given as a pill. Strychnine with iron as a tonic, or—

℞.—Bichloride mercury..... gr. j.
Tr. ferri chlor..... ℥j.
M.—S. Ten drops three times daily in water.

Another agreeable way of giving iron for the anæmia, combined with quinine and arsenic, is—

℞.—Ferri et quininæ citratis..... ℥ij.
Liq. potass arsenitis..... ℥ij.
Syr. limonis..... ℥iv.
M.—Sig. Teaspoonful three times daily.

Iodide of potassium, as an alterative, in 5-grain doses, is highly recommended in enlarged spleen and liver; if it disagrees with the stomach after giving it in milk, stop it at once. Nitrate of potassium, in from 15 to 20-grain doses, three hours apart, has failed in my hands to produce the good effect claimed for it by some.

Vomiting is one of the most obstinate symptoms in some cases. I usually encourage it by salt or mustard water until the emesis is free; then with—

℞.—Hydrochlo. cocaine..... gr. ij.
Milk of magnesia..... ℥j.
Aq. lauro cerasi..... ℥j.
M.—S. Teaspoonful every hour or two for nausea.

Or—

℞.—Morphiæ sulphas..... gr. iss.
Sodæ bicarb..... ℥j.
Acid carbolic..... gtt. iv.
Aq. menth. pip..... ℥ij.
M.—S. Teaspoonful doses, two hours apart, with mustard over the stomach and crushed ice by the mouth.

This will check the most obstinate cases. You need not try any tasteless syrup of quinine; it does not exist.

"You may licorice, yerba santa, and tannate if you will,
But the bitter of quinine will hang around it still."

Equal parts of pulv. ginger, syrup of tolu, saccharine, have all been used to disguise its taste. If it cannot be taken

in capsules or with any of the agents which partially disguise it, it is best given by the rectum, in suspension, as mentioned before.

As the progress of development goes on in the country, malaria becomes less and less common; with improved sanitation and a better knowledge of its pathology, we are learning to handle it better. Some of the M.Ds. in the Mississippi Valley speak of the hematuric variety in the lightest way, claiming to cure it by emulsions of turpentine as readily as you can cure any other ordinary disease with a simple remedy. I, personally, have no experience with turpentine in the hematuric form of the disease, and only hope the discovery that the swamp M.Ds. have made will hold out against all emergencies in the future.

A CASE IN CEREBRAL SURGERY.

OPERATED BY W. S. HUSELTON, M.D., VISITING SURGEON TO THE ALLEGHENY GENERAL HOSPITAL.

By MARK A. RODGERS, M.D.

AN extremely interesting case in cerebral surgery came under the writer's notice during August of last year, which will doubtless be of interest to admirers of modern surgery.

Miss H., aged fifty-seven years, occupation domestic, was admitted to the Allegheny General Hospital, July 27, 1891.

Family history was negative, with the exception that in the case of one sister, a hysterectomy had been performed, from the effects of which she died, for what was —presumably from subsequent developments—a malignant growth.

Personal History.—She had the ordinary diseases of childhood, but suffered from no sequelæ. On her admission to the hospital she was suffering from severe pains in the head. Her temperature was normal but pulse slightly accelerated. Her menstruations had not ceased, and she complained somewhat vaguely of metorrahagia and general menstural disturbance, but would permit no vaginal examination. According to the statements of her friends, about five years previous to her admission, a tumor had appeared above and behind her left ear. She had severe headaches and her memory began to wane. The tumor increased in size, her mind became more and more impaired, and her headaches more severe.

On examination, a tumor was found about the size of a goose-egg, extending from the lambdaidal suture immediately behind the mastoid process, to a point midway between the parietal eminence and the external occipital protuberance. On palpation it was extremely painful, semifluctuating, immobile, and adherent to the tissues of the pericranium. An exploring needle was introduced with negative results, but its withdrawal was followed by an unusually profuse hemorrhage (the size of the puncture considered) and slight febrile reaction.

On August 18, an operation was decided upon for the removal of the growth. The patient was etherized and the part prepared with due regard to asepsis. An incision large enough to admit of enucleation was followed by a most extraordinary hemorrhage, which was temporarily uncontrollable. The tissues of the scalp were dissected from the tumor with great difficulty, the hemorrhage meanwhile continuing. The capsule of the growth was then ruptured and proved to be the membranes of the brain which, with the tumor, had eroded their way through the bones of the skull. The membranes were separated and the mass carefully removed to a plain slightly below the level of the normal cortex. At this point the hemorrhage became appalling. The blood jetted from innumerable arteries, and the patient went into a state of profound collapse. The anæsthetic was suspended and hypodermic injections of strychnine, digitalis, ammonia and brandy were administered. The membranes and tissues of the scalp were closed with interrupted catgut sutures a hot bichloride compress applied, and the patient removed from the table pulse less, and with death apparently imminent.

Hypodermics of brandy were administered every fifteen minutes for one hour; at the end of that time the patient was able to swallow, and f℥ss of brandy was exhibited. Brandy was given during the night in considerable quantities, and patient rallied well. Next morning her temperature rose to 102° F., with pulse 118; same evening, temperature 101⅘—pulse 110.

On the 20th, symptoms of crossed hemiplegia were incipient, the left eye drooped and the right arm and leg, although showing no decided paresis, were markedly

weaker than those of the opposite side. The tongue, on protrusion, inclined towards the left. These symptoms soon disappeared, however, and on the morning of the 26th, patient's temperature was normal, with pulse 88. The wound healed by first intention, and on the 30th she was permitted to sit up.

Discharged September 18, with no apparent return of tumor and in good health, although as regards her mental condition not much improved.

The aperture in the skull, through which the tumor projected, was ovoid in shape, having, perhaps, the diameter of a hen's egg, and the edges rough and serrated. In the excitement attendant upon the operation, the neoplasm was forgotten, and therefore no sections were made for microscopical study; but from the position of the growth, one is safe in making the diagnosis glioma or glio-sarcoma.

Since this patient has left the hospital, we have lost track of her, and consequently are at present unable to make any statement as to the ultimate result.

HISTORY AND THERAPY OF CASCARA SAGRADA (RHUMNUS PURSHIANA. DE CANDOLLE) IN SCIATIC AND SOME OTHER AFFECTIONS.

By T. G. STEPHENS, M.D.,
SIDNEY, IOWA.

THE circle of science has grown too wide to be compassed by any human intellect, however great. The man who knows the most will be free to admit that all his attainments are limited and humble, when compared with what he does not know. A single branch may afford a field for the exercise of the most vigorous faculties through the longest life. *Ars longa vita brevis* was the first aphorism of the father of medicine, in reference to his profession, more than two thousand years ago. How much more true is it of the science of the present day, enriched by the discoveries of so many successive ages! The mind cannot embrace all, but in the midst of a countless multitude of studies must fix upon those which promise the highest reward. Goodness, it may be affirmed, is better than greatness; purity is more excellent than power; virtue than knowledge. As those evils which touch nothing but the body of fortune, according to the fine sentiment of the heathen philosopher, are trivial in comparison with those which affect the soul, so those studies are above all others in value, which, while they strengthen the mind, purify the affections, and while they store it with knowledge, fortify it with just and elevated principles. Among the branches of human knowledge which have given efficiency to labor and multiplied the comforts of life, therapeutics holds a conspicuous place.

On the 24th day of December, 1891, I was invited to see Miss X, fifty-five years of age, who had been suffering from sciatica for five consecutive weeks, the pains radiating from the sciatic notch and extending along the ham and peroneal surface of the right leg to the ankle, and at times was very severe, completely disabling her from walking. After diagnosing the case, my first thought was to give her a hypodermic injection of morphine and atropine, but, my syringe being out of order, gave her half a grain of morphine as a temporary expedient to relieve the present suffering, leaving a few more doses in case of the severe pain returning, and ordered the extract of cascara sagrada every six hours, commencing with 5 drops, and increasing 1 drop each day until free purgation was induced, then to give a dose of morphine, discontinuing the former for twenty-four hours. The next day, about the same hour of my visit, I heard from her, and that she was feeling better, could make slight motion with her leg without pain; but the family thought that I had better call and see her during the next day, which I did, and found her a little feverish, but did not change the course of treatment, as the pain was still ameliorating. The next day I called again, and found an abatement of both the fever and paroxysms of pain. During the fourth day the medicine operated on her bowels freely a number of times; was discontinued, and a dose of sulphate of morphine given, which had a happy effect in controlling them. After an omission of twenty-four hours the cascara was resumed as before, commencing with the original dose, increasing the medicine as before, and continuing the treatment for a few days, when it was suspended, as she appeared to be cured, and has remained well up to the present time, six months. The only auxiliary used in connection with the cascara treatment was massage with the balls of the fingers two

or three times a day, following the course of the sciatic nerve and venous circulation from the ankle to the hip. This medico-therapeutic procedure is a great help in such cases, as well as in many other ailments, and has led to the manufacture of many ingenious instruments for that purpose, a few of which my be mentioned here: *Percuteur*, or hard mallets; *roulettes*, or rollers of wood; the *batoir elastique*, elastic muscle beater; the "switch electrode," which is used in connection with electricity.

The cascara sagrada, like many other medicinal agents, has received a variety of synonyms, as chitten bark, sacred tree bark, shittim wood, beurberry, bear wood, etc. Only the bark is used in medicine, which is from one-twenty-fifth to one-eighteenth of an inch in thickness. It was first discovered by Dr. Bundy, of Calasa, California, who used it in his practice. The Aborigines, however, had used it in domestic practice prior to this time. It grows to be a small tree, sometimes attaining the height of thirty-five or forty feet, but averaging only about twenty feet; its maximum diameter being eighteen inches, but more frequently twelve. Its name was given in honor of the renowned Prussian botanist, Frederick Pursh, who, in 1814, gave it such a description as to fix its place in botany. The plant belongs to the natural order, *rhamanaceæ*. The genus itself comprises about sixty species, only seven being met with in North America; five of these on the West Pacific slope of North American, especially California. In 1877 Parke, Davis & Co., Detroit, Michigan, introduced the rhumnus purshiana to the medical profession, since that time it has been extensively used in this and foreign countries, in some of which it has been made officinal, and its principle use has been that of a tonic-cathartic and aperient, its *modus operandi* being different from any other remedy with which we are acquainted. The laxative properties of the rhumnus purshiana are said to reside in the resins present, while the tonic effects are due to the bitter crystalline principle. In collecting the bark of this plant for medicine, great care should be used in order to get the bark of plants whose roots are well covered with soil, in order to have good nourishment; if they are not, the development of the plants will be poor and the bodies unsound. In many respects the rhumnus purshiana is like the genus copaifera. Even when not adulterated its medicinal virtues are not apt to be uniform, as locality and age are liable to make a difference in its physical properties, even its chemical composition and character, thickness of the bark, etc.

Therapy.—In several cases of *uscaris vermicularis* I have had the best of results from the administration of cathartic doses of the fluid extract of cascara sagrada. I have used the cascara sagrada in a number of cases of chronic rheumatism where the usual remedies in this affection had failed to give satisfaction, and with excellent results. Dr. L. P. Barber (*Medical Summary*, February number, 1888), says: "As an anti-rheumatic, I believe this remedy has come to stay." James M. Hale, M.D. (*Medical Summary*, November, 1888), says: "I have now treated ten cases of rheumatism with cascara sagrada with greater success than I have ever treated ague with quinine. From the standpoint of the clinician, cascara seems to possess certain properties which bear a striking similarity to the properties belonging to both ipecac and calomel. As regards its influence on the blood, cascara accomplishes more than ipecac, but it is less a stimulant to the nepatic function than that drug—a loss which is made up by its laxative effect, in which respect it strongly resembles calomel." He further says: "In small doses, repeated at short intervals, cascara is a laxative; but little, if any, griping is produced, and, unlike rhubarb, is not astringent when used in this manner. On the contrary, the judicious use of the drug seems to favor the return of the healthy secretions of the entire alimentary tract, and, as a consequence, the stools are large and soft in consistence, and that peculiar burning sensation caused by the exhibition of aloes, is altogether wanting. While aloes increases secretion from its irritant action, cascara more nearly imitates nature, the watery portion of the blood being removed from the system, thus lessening the tendency to pelvic congestions."—Dr. John Aulde, in the New York *Medical Journal*, June 28, 1890. J. V. Bustin, M.D., Belle Union, Ind., says: "I have used cascara sagrada in twelve cases of chronic articular rheumatism and have found marked relief in all except one."—*Medical World*, January, 1889. Dr. R. C. Cobham, of Dayton, Ohio, in speaking of the use of

cascara sagrada in rheumatism, gives a number of cases which he has treated with this remedy.—*Medical Summary*, December, 1888. T. Goodwin, M.D., of the U. S. Marine Hospital Service, according to an article published in a recent issue of the New York *Medical Journal*, claims to have accidentally discovered in cascara sagrada a specific against rheumatism; exhibiting the drug first upon himself, he says: "I have since used the cascara in fully thirty cases, with the exception of three or four, in which there was a syphilitic taint, I have obtained the most satisfactory results. I commenced with 1 cc., t. i. d., and have so far never had to increase it beyond 1.5 cc., and even to this extent in but two cases. I have seldom had to wait beyond twenty four hours for beneficial effects." Further on in his article he says: "In many cases of chronic malarial poisoning with relapses of chills and fever, which quinine or any other alkaloid of Peruvian bark would only check for the time being and never establish a permanent cure, we have been in the habit for a number of years, in all such cases, to commence our treatment by first administering a sufficient quantity of quinine to check the chills as soon as possible, and at the same time would prescribe, if the patient's bowels were constipated, fl. ext. cascara sagrada sufficient amount to procure several free evacuations during the following day; this would be followed with from 15 to 25 drops of fl. ext. gentiana quinque flora, combined with sufficient fl. ext. cascara sagrada t. i. d. to keep the bowels in a soluble condition; this treatment, along with the ordinary doses t. i. d. of elix. iron, quinine and strychnine in all anæmic cases, would be continued for several months or longer, until all traces of the malarial poison had apparently disappeared from the system."

AN EMERGENCY CASE.

By WM. F. WAUGH, A.M., M.D.

SOMETIMES the doctor is needed in a hurry; and when he gets to his patient he finds that his medicine is also needed in a hurry. It may be at night, when the drug store is closed; or it may be that there is no time to send for the needed articles. For many reasons it is a good thing to have on hand a case stocked with all the necessities one is likely to need in any of the cases that are apt to require prompt attention. I must disclaim at the outset any notion of making a list to suit any sized drug-case. I wish rather to consider the emergencies that are likely to require quick aid, and the best remedies for such conditions. As to the number, that is a secondary consideration.

As the practice of a physician includes all the departments of medical science, it is obviously essential that the emergency case should contain the essentials for medical, surgical and obstetrical emergencies, as one does not want a separate case for each class.

The cases most likely to require prompt aid are as follows:

Abortion.—Morphine to check; ergot to control hemorrhage; a tampon rubber bag; chloroform.

Alcoholism.—Pilocarpine to sober up; tartar emetic to control frenzy; strychnine for heart failure.

Anæsthesia Collapse.—Digitalis hypodermically; trinitrin, strychnine.

Angina Pectoris.—Trinitrin, acetanilide; morphine to relieve paroxysms.

Apoplexy.—Aconite, to control pulse; elaterin, to purge; strychnine, for heart failure.

Asphyxia.—Trinitrin, strychnine hypodermic.

Asthma.—Trinitrin, morphine, apomorphine, chloroform, atropine, for paroxysms.

Bronchitis, Capillary.—Apomorphine, to cause vomiting; chloride ammonium, mustard leaves.

Burns.—Aristol in oil or ointment.

Calculi, Biliary or Renal.—Chloroform, morphine, to relieve pain.

Cerebral Congestion.—Acetanilide, elaterin, to purge.

Cholera Infantum.—Zinc sulphocarbolate, morphine, strychnine, blister back of ear; bismuth with coffee or brandy, supplied by family.

Cholera Morbus.—Morphine, hypodermically; zinc, bismuth.

Colic.—Chloroform, camphor, or morphine, internally; ipecacuanha emetic.

Coma.—Pilocarpine hypodermically; elaterin, to purge

Convulsions.—Chloroform, pilocarpine, morphine, brandy, atropine, will fill all indications.

Croup.—Apomorphine, as emetic; morphine, aconite, for first stage; intubation

for second; ipecacuanha with cold compresses for catarrhal form.

Delirium.—Tartar emetic for frenzy; hyoscine for most forms; coffee, cocaine for debility; acetanilid for fever.

Delirium Tremens.—Cocaine and capsicum, hyoscine.

Diarrhœa.—Morphine, zinc sulphocarbolate, camphor, bismuth.

Diphtheria. — Pilocarpine, antiseptic lotions.

Dysentery.—Pilocarpine, ipecacuanha, zinc sulphocarbolate, bismuth, morphine, with hot enemas; camphor and strychnine for collapse.

Dysmenorrhœa. — Acetanilide, gelsemium, hot injections.

Dyspnœa.—Chloroform, apomorphine, trinitrin, morphine, digitalis.

Dysuria.—Morphine, camphor.

Epistaxis.—Ergot, digitalis, aconite, elaterium, ipecacuanha, hot water to the feet, ice to nose and back of neck, tampon with rubber bag.

Erysipelas. — Pilocarpine, digitalis, aconite.

Fever.—Acetanilide, aconite, ipecacuanha, quinine.

Gastralgia.—Morphine, chloroform internally; bismuth.

Glossitis.—Incisions, ice, pilocarpine.

Glottis Œdema.—Elaterium, puncture, intubation, hot or cold water to neck.

Gout.—Colchicine.

Hay Fever.—Trinitrin, morphine, chloroform, pilocarpine.

Headache.—Acetanilide, zinc sulphocarbolate, aconite, atrophine, trinitrin.

Heart Palpitation.—Digitalis, strychnine, aconite, camphor, colchicine, hyoscine, atropine.

Hemorrhage.—Digitalis, ergot, aconite, cocaine locally, rubber bag tampon.

Hernia.—Chloroform, morphine, apomorphine, ipecacuanha, stand on head, and taxis.

Hydrophobia.—Pilocarpine, hyoscine, chloroform.

Hysteria. — Chloroform, ipecacuanha, elaterium, camphor, trinitrin.

Insomnia.—Hot water, hyoscine, atropine, camphor, morphine.

Hiccough.—Chloroform, apomorphine, pilocarpine.

Intestinal Obstructions. — Morphine, chloroform, hot enemas.

Labor.—Chloroform, morphine, ergot, digitalis, quinine, strychnine, pilocarpine, brandy.

Laryngismus Stridulus.—Chloroform, trinitrin, camphor, atropine, aconite, ipecacuanha, apomorphine.

Lumbago.—Morphine, pilocarpine, aconite, camphor, ammonium chloride, chloroform locally, hot water, acetanilide.

Mania.—Atropine, hyoscine, camphor, morphine, tartar emetic, digitalis, gelsemium, cold water.

Measles.—Acetanilide, aconite, ipecacuanha, morphine.

Meningitis.—Aconite, gelsemium, tartar emetic, morphine, pilocarpine, elaterin.

Myalgia.—Ammonium, chloride, atropine, gelsemium, aconite.

Neuralgia.—Acetanilide, gelsemium, atropine, camphor, cocaine, morphine, quinine, chloroform, hot water.

Odontalgia—Otalgia.—Brandy locally, chloroform, morphine, ipecacuanha, acetanilide, cocaine locally.

Orchitis.—Atropine, ammonium, chloride or digitalis locally, cold or hot water, bismuth.

Pleurisy.—Pilocarpine, morphine, elaterin, tight bandage, aconite.

Pneumonia.—Pilocarpine, aconite, tartar emetic, digitalis, morphine, acetanilide, quinine, cocaine.

Poisoning. — Apomorphine, ipecacuanha, tartar emetic, as evacuants; morphine, chloroform, to relieve pain; acids, alkalies and demulcents can be obtained easily; the chemical antidotes are rarely of any use, as the damage is done before they can be applied.

Rheumatism. — Acetanilide, aconite, gelsemium, morphine.

Scarlatina.—Aconite, acetanilide, gelsemium, pilocarpine, antiseptic lotion.

Sciatica.—Acetanilide, morphine, atropine, gelsemium, ammonium, chloride.

Shock.—Camphor, brandy, trinitrin, strychnine.

Stings and Bites of Bees, Snakes, etc.—Pilocarpine, brandy, camphor, strychnine, alkalies or caustics locally.

Sunstroke.—Acetanilide, for hyperpyrexia; brandy, camphor, strychnine, for heat exhaustion; atropine for intermediate cases.

Syncope.—Trinitrin, brandy, camphor, atropine, chloroform internally, cold water.

Uremia.—Pilocarpine, elaterin, morphine, digitalis, colchicine.

Vomiting.—Bismuth, chloroform, internally zinc sulphocarbolate, morphine, ipecacuanha, cocaine; total abstinence

from all ingesta for some hours, blister to epigastrium.

Wounds.—Digitalis, ergot, for hemorrhage; brandy, camphor, trinitrin, to resuscitate; aristol antiseptic lotion to dress; aconite, acetanilide for fever.

We find that in this list we have enumerated the following remedies, of which we have also suggested the form most appropriate, and the quantity of each that should be provided:

Acetanilide, 5 gr. pills or tablets....	25
Aconitine, $\frac{1}{100}$ gr. granules or tablets	100
Ammonium chloride, 5 gr. tablets...	25
Apomorphine, $\frac{1}{10}$ gr. hypodermic tablets	50
Aristol in powder, grains.....	30
Atropine, $\frac{1}{100}$ gr. granules or tablets.	100
Antiseptic tablets	25
Bismuth subnitrate, 5 gr. tablets....	25
Brandy, 4 oz. bottle	
Camphor, ½ gr. coated pills.....	25
Chloroform, 2 oz. bottle.....	
Cocaine hydrochlorate, ½ gr. tablets	25
Colchicine, gr. $\frac{1}{100}$, granules or tablets	25
Digitaline, $\frac{1}{60}$ gr., hypodermic tablets	100
Elaterin, gr. $\frac{1}{8}$, tablets or granules ..	50
Ergotine, gr. 1 tablets or pills (Bonjean's)	25
Gelseminine, gr. $\frac{1}{100}$, granules.....	50
Hyoscine, gr. $\frac{1}{100}$, granules.....	25
Ipecacuanha, gr. 1, granules or tablets	50
Morphine, $\frac{1}{4}$ gr., hypodermic tablets.	100
Pilocarpine hydrochlorate, $\frac{1}{8}$ gr., hypodermic tablets	25
Quinine, hypodermic tablets.....	25
Strychnine, $\frac{1}{20}$ gr., hypodermic tablets	50
Tartar emetic, $\frac{1}{2}$ gr., tablets or pills.	25
Trinitrin, $\frac{1}{100}$ gr., granules.....	100
Zinc sulphocarbolate, $2\frac{1}{2}$ gr., pills...	25

This comprises a list of twenty-four bottles of pills or tablets, with small bottles of brandy and chloroform. The quantities suggested are small, as it is supposed that the case will be refilled promptly. The doses are made large so that full doses can readily be given, and where small ones are needed the large can be easily divided.

Hypodermic tablets are suggested whenever practicable. In most cases these can be given in hot water, by the mouth.

Besides these, the case should contain the following articles:

Rubber bag for vaginal tampon, with tube to fill with water.

Pocket case of instruments. Stocked with all necessaries.

Adhesive plaster.

Bandages.

Jack-knife.

Tourniquet.

Hypodermic syringe.

Blister plaster.

Mustard leaves.

Intubation tubes.

Combination syringe.

Sponges.

Nail brush.

Thus armed, the physician can snatch his bag, and rush off to encounter any emergency that he is likely to meet; medical, surgical or obstetrical, with perfect confidence in the adequacy of his resources.

TREATMENT OF SEBORRHŒA OF THE HAIRY SCALP.—Dr. Saalfeld (*La Semaine Médicale*, No. 29, 1892) recommends the following treatment of seborrhœa of the hairy scalp:

Rub the scalp every evening with an alcoholic solution of green soap, then pour a little tepid water on the head, to thin the soap. Leave this on the head for a few minutes, wash the hair with tepid water, and, after having dried the hair well, rub the following pomade into the scalp with the finger or a small brush:

R.—Sublimed sulphur.....	gms. 3–5 (grs. xlv–3j¼.)
Lanolin.....	gms. 3 (grs. xlv.)
Benzoated lard	gms. 30 (℥j.)

This ointment prevents the formation of crusts and pellicles in excess. If the patient complains of itching, which is present in nearly every case, then one may add 30 centigrammes to 1 gramme (5 to 15 grains) of salicylic acid, previously dissolved in a sufficient quantity of rectified alcohol. The washings and the applications should be made every day, and, when improvement sets in, every eight to fifteen days.—*Lancet-Clinic.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

WM. F. WAUGH, A.M., M.D., Managing Editor.

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THE PRESENT POSITION OF ANTISEPTIC SURGERY.

FROM time to time it is not only interesting, but is also a necessity, to take an occasional retrospective glance through the near past, and, as it were, compare notes, and see where we stand.

Just now, that sufficient time has elapsed, we may inquire, What is the precise, definite position of antiseptics in surgery? The medical side of the question we will give our attention to, later.

We believe, from what can be gathered from the latest literature on the subject, that antiseptic surgery, as taught and practised as recently as five years ago, is now something of the past.

When Lister introduced the spray, and argued with great force the importance of purifying the atmosphere of the operating-room, and seeking out the stray germs, lodged in sundry recesses of one's apparel or surroundings, Lawson Tait, with stinging sarcasm, recommended that the nozzle of the apparatus would do the most good, when pointed out, through the window. The spray went.

Reports commenced to come in that antiseptics must be eschewed in the surgery of the peritoneum. It was discovered that in traumatism penetrating the skull and involving the brain, when treated antiseptically, were attended with a terrible mortality, through a consecutive, irritative meningitis. Antiseptic irrigation of the pleura, in empyema, is no longer employed by the French surgeons.

Bichloride solutions, when used in amputations, though they favor prompt union, are said to cause, very often, painful, useless stumps, through an insidious osteo-myelitis which they excite in the cellular elements of the cancellous bone substance.

Antiseptics—or, rather, chemical solutions—were practically condemned by the American Surgical Convention of 1891. Prof. Chiene, a townsman of Lister, sounded the death-knell of antiseptics, in Great Britain, when he announced and demonstrated that chemical solutions of any description were foreign substances, irritants, and had no place in healthy tissues.

This, indeed, is a sad commentary on what was taught but yesterday, as a cardinal doctrine.

Morell Mackenzie narrowly escaped imprisonment at the hands of his unfriendly German confrères, because he did not boil or pickle his spatula, every time he used it on the Prince's tongue.

Although the above, must be a humiliation to those who pin their faith absolutely, to scientific medicine, it will teach a useful lesson to many, who are too strongly inclined to dogmatize.

SANITATION A PROTECTION OF THE INDUSTRIAL CLASSES.

THE recently terminated French Workmen's Sanitary Congress certainly occupies a new field, and has an important mission to fulfill. The rich who occupy comfortable homes and can supply all their reasonable physical wants, are altogether too oblivious of the deplorable hygienic state of most of the industrial classes.

We all know with what unequal conditions they struggle. They are exposed to the dangers of inclement weather in winter, and over-heat in summer. They work in occupations which are destructive of health and dangerous to life. They are housed in tenements and districts which are laid out and constructed in utter disregard of the decencies and comforts of life and the preservation of health. They are exposed almost without the shadow of protection to the most fearful epidemics which visit humanity. They are entirely at the mercy of speculators in provisions in regard to the most swindling and dangerous adulteration of their food supply. In addition to all this, their constant drudgery leaves them so little time or energy for study that they are necessarily ignorant of the fundamental principles of personal hygiene.

Now this is all wrong. How should it be righted?

1. Enlarge the health department of cities, and give them sufficient means and authority to keep the city constantly in the best sanitary condition, and to suppress contagious diseases.

2. Enact such laws as will effectually prevent rapacious landlords from crowding the poor together in unhygienic tenement districts, or erecting unsanitary dwellings in any district.

3. Enforce more strictly the laws in regard to the inspection of factories and the general conditions of labor. Make proprietors financially responsible for expenses and loss of time incurred in sickness by their employés, due to their disregard of proper conditions of labor.

4. Where a pure and wholesome food supply cannot be secured, establish a public supply at actual cost until private dealers are willing to yield to the requirements and mend their ways.

5. Extend to the fathers and mothers of families every possible facility, by means of circulars, tracts and lecture classes, of becoming well-informed in regard to the principles of dwelling sanitation, diet and personal hygiene for themselves and their children.

The objection will be made by some that this is in the direction of an enlargement of public functions. Well, so be it. Who is opposed to our continuing in the line of social progress? Or who thinks that we have reached perfection in the organization of society? J. J. T.

Annotation.

IMMUNITY FROM CONSUMPTION PRODUCED BY USE OF TOBACCO.

WE have heard the theory frequently advanced that the use of tobacco, especially by smoking, rendered the habitué immune from consumption of the lungs. It now comes out in the shape of a formal paper read before the Jackson County, Missouri, Medical Society, by Dr. Theodore Griffin, of Kansas City, and published in the *Pacific Medical Journal*. We should like to hear the views of the readers of this journal expressed upon the subject, fortified by whatever observations they have made in the course of their experience.

Book Notices.

HISTORY OF HIGHER EDUCATION IN MASSACHUSETTS. By GEORGE GARY BUSH, Ph.D.

SOUTHERN WOMEN IN THE RECENT EDUCATIONAL MOVEMENT IN THE SOUTH. By REV. A. D. MAYO, M.A.

These are two very interesting volumes, sent out by the Bureau of Education, Washington, D.C.

CARDIAC OUTLINES. By WILLIAM EWART, M.D., Cantab., F.R.C.P., etc. London, England. Cloth; 165 pages; profusely illustrated. Price, $1.50. Putnam's Sons, N. Y.

We have carefully examined this work, and find it eminently adapted to the use of those who would like to master the fundamental principles of cardiac diagnosis.

The Medical Digest.

THE BEST FROM THE GERMAN JOURNALS.

(Translated by HERMAN D. MARCUS, M.D.)

CALCULI IN THE PREPUCE.—Dr. Beller (Krankenhaus Moabit), reports a case of præputial calculi. Patient forty-five years old; tailor by occupation; has been always a sufferer of a constricted foreskin. He has had no venereal disease.

Since 1870 he has had, at different times, difficulty in urinating; also pain, turbid urine, etc. Some years later he noticed small stones in his urine, and at times a stone would occlude the opening in the prepuce and be only removed after considerable pressure. About that time he observed a hardening behind the foreskin, and soon urinating became very painful. Urine was cloudy and very foul smelling, subsequent circumcision disclosed the prepuce filled with one large stone, weighing over two drachms, and four smaller calculi of a combined weight of one-half drachm.

The stones were of a brownish-yellow color, and had a smooth surface. They were composed (chemically) of carbonate and phosphate of lime, uric acid ammonium and phosphate of ammonium-magnesia. No organic elements were found, xanthoproteic reaction was not present. The wound healed by first intention under the application of aluminium acetate. The treatment of the present cystitis was difficult. The meatus was constricted, and it was hardly possible to introduce a very small catheter, the stricture extending deeply in the urethra. It was, therefore, found necessary to make an external urethrotomy, and a silver self-retaining catheter was then introduced. The subsequent progress of the lesion was very lingering and not very satisfactory. The cystitis is, in a measure, still present.

—*Archiv f. Klin. Chirurgie.*

SALIPYRINE.—Dr. Argo (Bunzlau) has published a report containing his observations with the use of salipyrine at the insane asylum at Bunzlau. He found the very best results, and recommends the drug highly, preferring it to antipyrine. The taste of salipyrine is less astringent and not disagreeable. Its use is not accompanied by the disadvantageous symptoms of antipyrine. It is given in 15-30 grain doses, using 15 grains per dose, or 45 grains per die. It being not easily solved in water, it is advisable to put the powder on the tongue and wash it down with water.

For a number of cases hemicrania with intense pain, 15 grains of the drug were found sufficient to stop the pain. The same prompt action was noticed in headache due to alcoholic excesses, even in such cases in which antipyrine refused to act.

Acute diseases of the nasal mucous membrane with excessive secretion, though not cured by this drug, were greatly improved; the disagreeable sensibility and local symptoms were decreased, probably due to a diminished sensibility of the mucous membrane. A positive hypnotic action was also noticeable. The patient slept after taking 15 grains in the evening very well, and continued to sleep during subsequent nights as long as he continued the drug (15 grains per night), while as soon as the drug was discontinued he again suffered from insomnia.

Two cases of chronic articular rheumatism were thus improved, and one who had been bedfast for some weeks was soon able to leave his bed, while the other, who had taken for three days 45 grains (pro die) of this drug, complained of very little pain. He has also employed salol in a number of cases of influenza, and found a nearly specific action.

—*Therapeutische Monatshefte.*

DR. HITSCHMAN (Vienna) who has made careful experiments with salipyrine has had no such favorable results with it as Dr. Argo. He has noticed that large doses cause disagreeable sweats and gastric disorders.—*Marcus.*

THE SALOL TREATMENT OF ACUTE AND CHRONIC CYSTITIS.—Dr. B. Arnold (Stuttgart) has employed salol in cystitis and deducts as follows:

1. Salol makes the alkaline urine acid.
2. It removes the foul odor.
3. It clears the cloudy urine, the mucopurulent sediment is diminished, and becomes lighter and flocculent, disappearing finally entirely.
4. The amount of urine is generally increased.
5. The stomach retains this remedy very good, and for a considerable time; this

makes salol superior to other drugs employed in cystitis.

This property is probably due to the insolubility of this drug in the gastric juice, becoming only solved after it reaches the intestines and the pancreatic juice is added, dividing it in salicylic acid and phenol (*Rosenberg*).

6. It is an excellent adjunct in washes for the bladder, especially when only weak antiseptic solutions are borne.

Arnold does not claim salol as a panacea, but as an excellent remedy in acute and chronic cystitis, rivaling the best anti-cystitic remedies.—*Therap. Monatshefte.*

PARALYSIS FOLLOWING DIPHTHERIA. Dr. A. Baginsky (Berlin) reports his observations of 244 cases of diphtheria. Out of these 30 cases were accompanied by paralysis, and this occurring either during the second or fourth week of the disease, or still later. The cases developing paralysis during the first few weeks of the disease showed generally a paralysis of the soft palate, coëxisting at the same time with marked nephitis and cardiac weakness. The paralysis appearing in the later weeks of the disease extend over nearly all muscles, the paralysis of the diaphragm being especially dangerous. We find, then, complete loss of voice; hoarse, aphonic cough, with difficult expectoration; dyspnœa, with thoracic breathing, during which breathing the lower part of the thorax is raised; the abdomen appears sunken.

Baginsky describes the cardiac symptoms and draws attention to the acute swelling of the liver, which accompanies weakness of the heart muscle.

Very interesting is a case of pronounced Cheyne-Stokes respiration, which was cured through oxygen inhalations.

Hypodermic injections of strychnine ($\frac{1}{32}$ to $\frac{1}{16}$ per die) were frequently prescribed, but Baginsky was soon forced to desist with such treatment in the early paralysis with cardiac weakness, this treatment appearing to be directly dangerous.

He then confined himself exclusively to a nourishing diet, administering it, if necessary, with the œsophageal probang, prescribing also caffeine and iron preparations. He also employs at times inhalations of oxygen.

—*Centralblatt f. Klein. Medezin.*

BRONCHNCELE. — Auerbauch recommends interstitial injections of acidum osmicum in the treatment of goitre. He injects into the tumor daily grain $\frac{1}{13}$ in solution, applies massage for about fifteen minutes, and uses internally iodide of potassium. After three weeks he noticed a decrease in the size of the tumor to about one-half, and the absence of all subjective and other symptoms.—*D. Med. Wochenschrfit.—D. Medizinal Zeitung.*

THE USE OF COCAINE IN OPERATIONS FOR MASTITIS.—Dr. Guillaume Rossier recommends the use of the following local anæsthetic in cases of suppurative mastitis, which call for operative interference:

℞.—Cocaine mur ..... gr. iij.
Aquæ bromide (4 per cent.)..... ʒv.

At first a few drops are injected under the skin, then the needle (hypodermic) is introduced deeper, and the solution injected parallel with surface of the skin into the papillæ. About thirty seconds later the incision may be made.

—*Corr. Bl. f. Schweizer Aezt.*

THERAPEUTIC NOTES FROM THE FRENCH.

(E. W. BING, M.D., CHESTER, PA., TRANSLATOR).

AN extemporaneous preparation of simple character, of bismuth, glycerine, tr. catechu and water, has proved very serviceable as injection for gonorrhœa.

—Bing.

MECCRISSE strongly recommends an infusion of coca leaves in the strength of 6 grms. to 100 grms. of water, as a preventive of sea-sickness (probably the wine would do as well).

—*L' Union Med. de Canada.*

FOR SIMPLE AND IMPETIGENOUS ECZEMA.—Dazac uses the following ointments, first:

℞.—Acid boric pulv..... 1 decigrm.
Lard (benzoinated)..... 10 grm.

Second:

℞.—Acid boric pulv.,
Acid carbolic.....āā 1 decigrm.
Lard (benzoinated)..... 10 grm.

For anæmia he prescribes at the first:

℞.—Syrup iodide iron..... 250 grm.
Old rum..... 6–12 grm.

Or second:

℞.—Syrup of quinia,
Syrup bitter orange peel,
Syrup lactophosph. lime,
Syrup of punch.....āā 65 grm.

—*Jour. de Med. de Bordeaux.*

A NEW method of extracting foreign bodies from the ear has been suggested by M. Humbert, in the *Revue Medicale de la Swiss Romand.*

It consists of a rod tipped with turpentine (solid), which melts sufficiently by the natural heat of the part to become attached to any substance with which it is placed in contact, and which may then be withdrawn.

—*Jour. de Med. de Bordeaux.*

M. FERRAND after recommending glycerine in the treatment of hepatic colic, and preferring it to olive oil, on account of its cholagogue action and smaller dose, draws the following conclusions:

1. Glycerine administered by the stomach is absorbed by the lymphatics, notably by those which go from the stomach to the bilum of the liver and gall bladder, and is even found in the blood of the (sub-hepatic) veins (intra lobular).

2. It is a powerful cholagogue, and of great value in hepatic colic.

3. In a relatively large dose (25 to 30 grms.) glycerine brings about the end of the paroxysm.

4. In a small dose (5 to 15 grms.) taken every day in a little alkaline water glycerine will prevent fresh attacks.

5. Without being a lithotritic, glycerine is par excellence the treatment for "biliary lithiasis."—*L'Union Med. de Pract.*

MEANS OF DETERMINING THE SEX OF THE FŒTUS IN UTERO (Lassier).—The author considers the theory of determining the sex by a fecundation just before or after the menses ridiculous. He says: "Before exposing my theory, which allows the accoucheur to determine the sex of the fœtus, let us establish first that in woman, as in all animals, there are two ovaries, of which one produces male germs, the other female germs, turn by turn, that is each in its turn. As the Creator has left nothing to chance, it cannot be otherwise. Besides this principle is amply proved by the ovipara, whose eggs are always paired.

"In the pigeon, the female lays two eggs, which hatch out a pair. With the canary and thrush the eggs are usually four in number, and are mated. If the eggs of the same hen are hatched, the sex of the chickens is equally divided, the same occurs in the case of the goose and turkey. This granted, let us apply the same rule to women, and we shall see that we have two means for the determination of sex.

"The woman emits an ovule every month, the ovaries produce each in turn; the germs are alternately male and female.

"A remarkable fact is that the period of gestation in woman is nine months, an unequal number. The same thing occurs in all uniparous animals: the mare eleven months; the cow nine months; the sheep five months, in such manner that whilst a female drops her young she sheds at the same time a germ of opposite sex.

"It is easy to understand why a woman who lies on her left side has nine chances to two of having a boy, because in this position the ovary which produces the male ovules has more chances of its ovule being fecundated than the other, and *vice versa.*

"I have established that the procedure of ovulation alternates in the production of the sexes. This also permits us to determine the sex by calculation. If the woman is a primipara, the accoucheur has the *decubitus* for a guide. If it is her second or third pregnancy, he has only to find out the sex of the last child. If it was a male at term, the ovule corresponding to the lying-in was female, and so on. A woman becomes pregnant at the ninth month after delivery; if the last was a boy, this will be a boy also. If at the tenth, it will be a girl."

—*Gazette Medicale.*

A CASE OF OSTEOMA OF THE FRONTAL SINUS.—These osteomas are rare; about thirty-three cases are on record. Operations for the radical removal of these growths are seldom done. Pappert reports a detailed observation of a case of this nature, cured by a radical extirpation of the bony tumor. It is remarkable on account of its large size and the difficulty of removal, which necessitated a large opening in the skull.

The tumor appeared nine years previously, and had increased considerably during the last eighteen months. It formed a hemispherical projection above the right eye, which it displaced forward, outward and downward. During the operation it was found that the tumor sent prolongations into the left frontal sinus, into the nasal cavity and into the orbit. The posterior wall of the frontal sinus projected into the cavity of the skull, and

was cribriform. In raising the tumor by means of the hammer and chisel, a plate of the posterior wall of the sinus was detached with the growth. The operation was not followed by fever, and at the end of a month the patient left the hospital.

The exophthalmos has disappeared, and over the frontal sinus there is a small depression. At the upper part of this the pulsations of the brain may be felt.

Munich Med.—Jour. de Med. de Bord.

PHTHISIS OF "CHINA" POTTERS. (*Paté*) M. Paté has studied the pernicious effects of the dust of "china" factories, which contains kaolin, sand and flint, colored with a small proportion of oxide of cobalt.

It is stated that many of the potters succumb to a chronic pulmonary affection, "Potter's phthisis." This is a sclerosis of the lungs, produced by the inhalation of the irritating dust. There are three periods in the evolution of the disease:

1. An emphysematous stage;

2. A stage which includes three varieties: (*a*) an emphysematous form (which is not an exaggeration of the first stage); (*b*) a pneumonic form, and (*c*) a suffocative form.

3. A final stage, that of asphyxia.

Tuberculosis in potters is not very frequent. It is remarkable for the slowness of its evolution. In certain cases, if the workman, after becoming tubercular, is not too weak to continue in the factory, he may become cured. A sclerotic tissue may surround the tubercles and suppress them. This mode of cure has been several times observed in the factory at Montereau.—*Rev. Gen. de Med., etc.*

DEATH FOLLOWING AN INTRO-UTERINE INJECTION OF PERCHLORIDE OF IRON.—(*Pletzer*) A woman, thirty-two years, syphilitic for ten years, was affected with chronic endometritis with retroversion. Curetting, intro-uterine cauterizations with tr. iodine had been used. Following one of these cauterizations, was a flow of blood from the neck of the uterus. The hemorrhage recurring the next day, an injection of perchloride of iron was given, drop by drop, with the greatest precaution. It was followed by an intro-uterine lavage, with a carbolic solution. About a quarter of an hour later the woman experienced much pain; the pulse was thready, and complexion livid. Although stimulants were used, she died two hours later. At the post-mortem there were found blood-clots in the uterus, thrombus of the iliac veins, and a laceration of the mucous membrane of the uterus one and one half cm. in length.—*Rev. Gen. de Med., etc.*

IN a case of hay fever, the minute seeds of the different germs were found in the nasal secretions and in the expectorated mucus.—Szohner.

THE USE OF MASSAGE OF THE LUMBO-SACRAL REGION IN THE TREATMENT OF DYSMENORRHŒA OF YOUNG WOMEN.—The frequent want of success of the classical therapeutic measures is well understood, when it is known that dysmenorrhœa in young women is almost always due to a double cause: first, to the narrowness of the external orifice of the neck; and, second, to the chronic congestion of the uterus, which, by puffing out the mucous membrane of the cervical canal, applies the opposite faces of the membrane, and narrows still further the passage for the flow of the menstrual secretion.

Massage of the lumbo-sacral region is the most rapid and efficacious method of overcoming the uterine congestion, the effect resulting from massage being much more lasting than that derived from hydrotherapy and by stimulating baths. Many cases of dysmenorrhœa have been submitted to this treatment. The massage has been practised according to the following method: Frictions, pressure, tapping or beating, kneading, etc., done once daily between the menstrual period.

If practised regularly during a fortnight before the period, almost always the menses come on. It is because there was no other cause for dysmenorrhœa than the narrowness of the external orifice. The canal has become permeable by the suppression of the congestion, and this obstacle has but a very limited extent compared with what it had at the commencement of the treatment. After this the case may be considered as cured.

—From *L'Union Med. de Canada.*

THE qualities necessary for a good antiseptic, especially if it is to be used in the natural cavities of the body, are as follows:

1. A considerable antiseptic power;
2. Very feeble toxic qualities;
3. Free solubility in water;
4. Complete absence of caustic effect;

5. Non-action on instruments, linen, etc.

Micròcidine as an antiseptic in urinary troubles is recommended as covering all the above conditions satisfactorily.

—Mabboux, *Gaz. de Gynécol.*

FL. EXT. HYDRASTIS CANADENSIS, in 20-drop doses four times a day, has proved very successful in the vomiting of pregnancy. It lowers the blood pressure, quiets the nervous centers, and diminishes the blood supply to the uterus.—Federow.

FORMULA—TREATMENT OF CYSTITIS BY OXALIC ACID (Renaud).—This treatment is said to be very satisfactory:

℞.—Acid oxalic..... 1 gm.
Syrup orange peel..... 30 gms.
Distilled water.....120 gms.

To be taken during two days, in tablespoonful doses.

PROSTITUTION (Blaschko).—In his report on this subject, Blaschko says: "The obligatory keeping in licensed houses of prostitutes is to be rejected from a hygienic point of view, and as a failure as regards the prophylaxis of syphilis. The surveillance should be transferred from the ordinary police to the sanitary police. It can only be exercised over professional prostitutes. Examinations should be practised at least twice a week and at hospitals. To the sanitary examinations should be attached "out patient" treatment for cases which do not need to enter the wards, and especially for cases which require care and watching after discharge from a hospital. Sanitary surveillance is not by itself sufficiently thorough to combat venereal maladies. It should be completed by suppression of all legal and other edicts against venereals, placing of them on the same footing as regards admission to hospitals, care and treatment, as other cases increase in the number of beds assigned to venereal cases; establishment of public consultations as an annex of the hospitals; free treatment; the dissemination of knowledge among the inhabitants of populous centers, relating to the dangers and the mode of propagation of venereal diseases."

—*Rev. Gen. de Med., etc.*

A SUICIDE BY MEANS OF LEECHES.—An abandoned woman in Paris has just committed suicide in an original manner. "She bought fifty leeches, undressed completely, and applied them over the body from the knees to the breasts. The leeches began at once to suck—never had they had such a feast! Then when they were gorged they fell off, but the blood continued flowing, inundating the bed. The hours passed thus. However, after a time the odor of corrupted blood attracted the attention of the landlord of the house, and much astonished he set about discovering the cause. He knocked at the door of the room, and receiving no reply, opened it and went in. The woman, of a waxy whiteness, was found extended on the floor, her eyes closed, but still breathing. She was taken to the hospital in a dying condition."

—*Jour. de Med. de Bordeaux.—Jour. de Med. de Paris.*

TÆNIN, A COMMON CAUSE OF INTERCOSTAL NEURALGIA, AND OF SHINGLES.—Dury reports a case of intercostal neuralgia, which resisted all ordinary treatment, and as it was discovered that the patient had tapeworm, treatment was instituted for that; after the expulsion of the worm the neuralgia disappeared. He also reports a case of shingles, caused also by tapeworm.—*Gaz. Med.*

MENTHOL, in treatment of hemorrhoids, is much praised; it relieves the pain and the spasmodic contraction of the sphincter ani, permitting the easy reduction of the humors.

COBWEBS AND TETANUS.—Tourassi and Frateni think that cobwebs are a frequent cause of tetanus, and give the following as the result of their investigations:

1. That the germs of tetanus exist in large numbers in certain soils, and are met with in cobwebs, along with the dust.
2. That even if these cobwebs do not contain tetanus germs, they do contain other pathological germs.
3. The employment in medicine of cobwebs as hæmostatic agents should be prohibited, in view of the risks incurred.

—*La Gazette Medicale.*

INSOMNIA AND ITS TREATMENT (G. Lyon).—Insomnia is always a phenomenon of a nervous character; in fact, a pathological state, determined by a definite alteration, or by a functional disorder of the nerve cell, inaccessible to our present means of investigation.

From a practical point of view we may distinguish nervous insomnia, properly

so-called, from insomnia of dyscrasic origin, where the want of sleep is provoked by toxic substances, or microbic poisons carried to the brain by the blood current. In the first class may be placed insomnia, having its origin in the periphery of the nervous system, or in the centers themselves. Sleeplessness due to pain, or to exaggerated sensibility is of peripheral origin. In other cases the brain is directly involved, as in insomnia due to the emotions, to neurasthenia, hysteria, insanity, or even to organic disease of the brain, as general paralysis, softening tumor, etc. The second class comprehends cases produced by the abuse of tea, coffee, alcohol, etc., and perhaps also those caused by infectious diseases. Cases due to digestive disorders may also come under this head when not the direct consequence of pain. This is not an improbable supposition, when it is remembered that tetanus, the higher manifestation of hyper-excitation of the nerve cell, is sometimes connected with dilatation of the stomach, and has been removed by lavage of the organ. The foregoing considerations prove that the treatment must be as variable as the cause of this trouble. The means of relief include hygienic measures, restriction of the use of various stimulants (including sometimes tobacco), change of scene, and drugs, among which are opium, chloral antipyrine, etc. "Febrile" insomnia is often very rebellious to treatment, here the bromides are useful. It must not be forgotten that insomnia may be due to alcoholism, and thus calls for the daily ration to which the subject has been accustomed, combined with soporifics, baths, etc. The insomnia of convalescence generally vanishes under the use of reconstructive measures and the use of codeine and allied drugs.

—*Annals de Med.*, June 15.

DRESSES "EN TRAINE," *versus* HYGIENE —There has just been formed in Berlin, a society composed largely of ladies, having for its object the suppression of trailing dresses, the fringes of which stir up the dust which may contain infectious germs.—*Lemain Med.*

PHENOL SULPHOVICINATE is acquiring a somewhat extended use in Paris as a remedy for diphtheria Cases of the disease have been cured in four days.

—*Le Progrés Medicale.*

SULPHO-VICINIC ACID, extolled by Renault, may be used in volume of 20 to 100 of carbolic acid, forming the sulphovicinate of phenol (above-mentioned). Its action on the mucous membrane gives a very transient sensation of slight heat and burning. Compared with some of the other drugs used in diphtheria, such as salicylic acid, chlorate potash, alum, boric acid, lime-water, etc., it shows great advantages.

ANTIPYRINE ASSOCIATED WITH BICHLORIDE OF MERCURY AS AN ANTISEPTIC TREATMENT OF GONORRHŒA (*Watier*).—Having used, on a certain case, an injection of bichloride, $\frac{1}{10000}$, and micturition being exceedingly painful, the author conceived the idea of following it up with an injection of antipyrine, $\frac{1}{100}$. The pain was at once relieved and the discharge quickly stopped. He tried antipyrine by itself, but had no good results.

He uses—

℞.—Antipyrine	.....	grms. x
Bichlor. mercury	.....	cgms. x
Water	.....	litre i.

The syringe must be in good order, and it is preferable to obtain one with a leather piston.

The most important point is to retain the injection a half hour, in order that it may act thoroughly on the mucous membrane. The number of injections per day may be from 3 to 4, used after micturition. He uses, in addition, the ordinary low diet, local baths, and antaphrodisiacs, if necessary.

—*Jour. de Med. et Cher. Pratigues.*

FOREIGN BODY IN THE RIGHT BRONCHUS (*De Angelis*).—A young girl, thirteen years of age, was amusing herself by throwing up in the air a small toy trumpet, and then catching it in her mouth (the measurements were 3 c.m. long and 66 m.m. diameter). During an inspiratory effort the instrument passed through the larynx and lodged in the trachea. A fit of suffocation came on. The bystanders gave her some blows on the back which had the effect of sending the body lower down, and relieving the distress of breathing ; but the trumpet at each inspiration and expiration gave out a sound which could be heard fifteen yards away. For three days this was the only annoyance caused, but after that she presented signs of broncho-pneumonia.

Tracheotomy was proposed and refused. She died twenty-three days later. The trumpet was found in the right bronchus, in a large ulceration. The larynx and trachea were normal.

—*Rev. de Laryngologie.*

A MIXTURE TO REPLACE THE OPIATES.—Dr. Portier (*La Semaine Médicale*, No. 19, 1892) recommends the following as a substitute for the preparations of opium:

℞.—Hydrochlorate of cocaine.....	cgms. 50 (gr. viij.)
Phenacetin.....	gms. 1.5 (gr. xxij.)
Exalgine.....	cgms. 50 (gr. vij.)
Salicylic acid.....	gm. 1 (gr. xv.)

Divide into ten powders. Take one powder every two or three hours until the pain ceases.

—Pritchard, *Lancet-Clinic.*

THE VERTIGO OF ARTERIO SCLEROSIS.[1]—The discussion of a pathologically subjective state is in itself practically impossible, and the difficulty is not lessened when that state is a symptom of many widely differing conditions, some functional and some grossly organic. To use the term vertigo is therefore undesirable, but for lack of one more definite its employment is a necessity, and in this connection is not open, perhaps, to the emphatic objection that elsewhere obtains. It is in its generic sense that I wish to make use of it.

In a very recent and comprehensive article, Suckling[2] takes up the subject of vertigo, and in a way describes it as the consciousness of disordered equilibration, showing that it may exist from want of harmony in the impressions received from any of the senses, and possibly from the sensibility of the viscera as well, but it is not the present purpose to direct attention to the physiology of equilibration nor to take up the interesting topic of co-ordination, which is closely associated therewith. He clinically classifies the forms of vertigo as aural, ocular, vascular, dyspeptic, nervous, epileptic, toxic, of organic brain disease, and from reflex irritation, but says specifically nothing of the vertigo of arterio-sclerosis. Most other writers either on the topic of vertigo or that of arterio-sclerosis are equally silent; yet vertigo may be and often is, as will be urged farther on, a signal symptom of this arterial state, the proper recognition of which may lead to such treatment as will obviate organic diseases of the brain, kidneys, liver, and other important structures, and many times definitely prolong life.

It is only of late years that arterial changes have been given the importance in pathology and in clinical medicine that they deserve. The degeneration of senility, the modifications found in gout, rheumatism, chronic metallic poisoning, syphilis, and which are associated with alcoholism, Bright's disease, and many other serious maladies, makes it imperative that we recognize at the earliest moment the presence of a change in the artery which may in many instances be amenable, in the early stage, to treatment, but which soon otherwise passes beyond the possibility of medical control. Atheroma is not here synonymous by any means. It is the pre-atheromatous condition with which we have to deal, and it is the vertigo symptomatic of that arterial fibrosis to which your attention is directed. As a matter of demonstrable fact, this arterial state is widely and generally disseminated in these cases, but the complexion of the disease varies with its local intensity. In some instances a contracted kidney, in others angina pectoris, in others the cerebral symptoms are the prominent features, and of the brain symptoms the earliest is vertigo, and the last cerebral hemorrhage or dementia.

When a man, past the prime of life, without any previous serious illness, becomes suddenly faint, has a swimming in the head, a feeling of giddiness, of distinct gyration, of darkness and impending death, one or several of these sensations, he usually at once seeks advice in grave apprehension, sometimes well founded, of approaching cerebral apoplexy, and usually gets a cholagogue cathartic, or is told that his stomach is wrong, and sometimes is told rightly. But cases are constantly presenting themselves in which such vertiginous attacks are happening at shortening intervals; the patient gives up his tobacco, his spirits, if he is a drinker, cuts down his meat, takes to some of the many waters recommended, has Turkish baths, and gains only moderate relief or

[1] Read before the American Medical Association, June 8, 1892.

[2] Birmingham Med., Rev., Nov., 1891.

none at all. If he is carefully examined he will probably present a well-defined tortuous frontal artery, a distinct arcus senilis, a strong, even a clanging, second sound of the heart, sometimes reduplicated, and give a sphygmogram indicative of increased arterial tension. The pulse may be abnormally slow or arhythmic, the urine scant and a trace of albumen is not rare. He finds that exertion of a moderate amount precipitates the attack, that he cannot endure a temperature at all above the usual, and often a change of position from recumbency to the upright is the occasion of a "blur" or of giddiness.

The attack itself is, as already indicated, widely variable in different patients, but usually consists with itself for the given individual. A fullness and throbbing in the head, a feeling of heat in the scalp, and a blur before the eyes are usually mentioned, and at such times marked paleness is noticed, followed, as a rule, by considerable redness of the face. There is a tendency to get into the open air, and badly-ventilated or close apartments are unendurable. An habitual smoker will sometimes find tobacco smoke repugnant. In more severe forms the patient may stagger, fall, or gradually sink to the ground; he cannot speak for a few seconds, though consciousness is rarely completely lost. The recumbent position is usually sought, or the patient clings to some object, and after a period of from five to twenty minutes, the feeling passes away, leaving him rather languid, with an inclination to sleep, and usually mentally depressed and apprehensive. At first he attributes the attack to anything and everything that in his estimation can cause a departure from health, and usually establishes a close watch upon his diet, habits and mode of life, is inclined to avoid exercise or exertion of any sort, fearing to precipitate an attack, or to go by himself on the streets, and, in short, becomes an invalid with hypochondriacal tendencies.

In a remarkable monograph on this subject, Professor J. Grasset,[1] of Montpellier, divides the vertigos of arteriosclerosis into three forms: (1) Simple vertigo, (2) Vertigo with epileptiform crisis, and (3) Vertigo with slow pulse and sycopic, or epileptiform attacks. Some of the features of the slighter attacks, as already roughly sketched, undoubtedly suggest a similarity to mild epileptic seizures, for instance, the paleness of the face, the oppression and the final confusion, depression and tendency to sleep, but personally I have never encountered well-marked convulsive phenomena reasonably attributable to this cause.

With Huchard,[1] this writer is inclined in some cases to attribute acquired habitual extreme slowness of the pulse, which in numerous reported instances has ranged from twenty to forty per minute, or even less, to the effect upon the medulla of an arterio-sclerosis acting mechanically to lessen the blood supply to the cardiac centers. As yet this hypothesis has received, as far as I have been able to ascertain, no positive anatomical or experimental support, though it is seductively reasonable. This bradycardia is almost always marked by syncopal and vertiginous features, and arises in individuals predisposed to or actually the subjects of marked arterio-fibrosis.

The diagnosis is often one of extreme difficulty, in spite of a hasty contrary statement by a recent American writer, and I have known this symptomatic vertigo confused with Meniere's disease by a very competent specialist in nervous diseases, for it may, as in that particular instance, be of a systematized character, that is to say, marked by a sensation of falling in a given direction, or of being rotated in a constant manner to the right or left, and even associated with a suggestive stagger. If to this a little middle ear catarrh is added, a diagnosis of aural vertigo might be easily reached, but a closer and somewhat wider examination will detect the integrity of the auditory nerve and the presence of the arterial fibrosis with the underlying predisposition of alcoholic excess, syphilis, gout, rheumatism, chronic lead infection, or other constitutional state of etiological significance.

In the treatment the basic element is the object of attack, and whatever this may be, the iodide of potash will find an indication in the arterial change, which, if recognized in its incipiency, can be practically controlled, providing the patient is manageable. It is the sheet anchor, and given in moderate doses of from 30 to 90

[1] Du Vertige Cardio-Vasculaire, Paris, 1890.

[1] Traité des Maladies du cœur et des Vaissaux.

grains a day for a number of months, much benefit and often a substantial cure can be expected.

I am lead to emphasize the importance of this vertigo, because it is a very early symptom of a condition which neglected leads to distressing and even fatal results, and which unrecognized is the source of endless anxiety and misery to the patient and of chagrin and disappointment to his medical attendant. If it were desirable numerous case records could be cited, but it is hoped that attention once having been called to a proper interpretation of the symptom it may be less frequently mistaken, and I would urge that the condition of the arteries and the heart be made an object of early and thorough investigation in every instance where obscure vertiginous attacks, or a persistent giddiness is present.

—Archibald Church, in *Brit. Med. and Surg. Jour.*

THE COATED TONGUE.—A physician, on being asked if he could speak many languages, replied: "I can speak but one language, but I can understand many tongues." I come with this question to-day: Do we, as physicians, understand the many tongues we see; do we comprehend their pathological significance?

The tongue has been called a mirror, reflecting the various conditions of the digestive organs, the composition of the blood, the state of the secretions, and the condition of the nervous power. It is dry when the salivary secretions are deficient, as in febrile diseases, in the exanthemata, and in typhoid fever. In the latter disease it has a brownish coat, and is often fissured.

The dry, encrusted, brown, and fissured tongue is often the seat of parasites that cause decomposition. It is a bad symptom, and is often the forerunner of death. The color of the tongue is subject to many changes. It is of a pink hue when the physiological actions of the stomach are carried on normally. It is usually very pale when anæmia exists. It is red and shining in the exanthemata. It is bluish or livid when there is obstruction to the venous blood, from diseases of the heart or lungs. A red, smooth tongue is a sign of failing nutrition, and is often seen in cases of phthisis.

Normally, there is no coating on the tongue, but the slightest variation of physiological functions, especially of the stomach or liver, produces one, varying in thickness from a slight furrowed condition to one of parchment consistency. It is whitish in catarrhal affections of the stomach, it is yellowish when the liver is disturbed, and it is brownish when the blood is vitiated from disease.

Certain medicines and occupations cause the tongue to become coated, and inflammatory affections of the throat often affect the tongue. Some of the coated tongues seem to have a covering that is literally organized, aud a part and parcel of itself. Too frequently the physician writes his prescription by looking at the tongue alone, believing that the coating is due to some catarrhal affection of the stomach, and we make the mistake in not thoroughly examining our patients, trying to discover the cause producing the malady. We see the effect only of the disorganized function on the tongue. How often we have heard our patient say: "If I could but get my tongue clean, I am sure I would be well." After we have tried an acid or alkali, and essence of pepsin or bitter tonic, without effect upon the tongue for the better, we begin to look for some other symptoms, which will throw more light upon the case. And about this time our patient has made up his mind to try another physician, and we do not have the opportunity of making the critical examination that we should have made when we were first consulted.

These coated tongues need their cause removed before they can be cured. We have all seen cases that have baffled our best efforts, and often we have been at a loss to know the cause of the persistent coating on the tongue. We have examined them, perhaps, by palpation and percussion. We have continued our medication for months, and yet the tongue is as coated as it was when we were first consulted. What is the reason for it?

Let me detail three cases that have come under my care in the past few months, and perhaps a cause may be found.

Case I.—Mrs. C., aged thirty-nine years; five feet eight inches in height; weight one hundred and forty pounds; mother of one child aged five years, at whose birth she suffered from lacerations of cervix and perineum. Her only complaint when she consulted me was for a persistent coating of the tongue, that had

existed for four years, from the time of the nursing of her baby, when she took three or four quarts of rich milk every day. The tongue was covered to the tip with a grayish-green coating, thicker behind, on the dorsum, than in front. There was no bad taste in the mouth, and on close examination only a slight sour odor was detected on the breath. Her appetite was fair. For two or three years she had been in the hands of the physicians, and each thought her case was catarrh of the stomach. A gynæcologist believed it to be dependent upon her lacerations, and was successful in repairing them; the operation did not cause her tongue to be any cleaner, though it improved her general health. Her complexion was pale and sallow; she was anæmic, and her pulse was weak. There was some tenderness over the liver, which was enlarged; the spleen was enlarged and tender. The urine passed freely; was low in specific gravity, 1.010, but contained no albumin or sugar, though I was led to suspect a chronic form of Bright's disease.

This case puzzled me very much indeed. I tried everything that I knew of, that was ever used in stomach affections, and all to no purpose. Then I asked for consultation, and named Dr. E. A. Chapoton as consultant. His examination was a very careful one, and finding the pulse weak, he employed auscultation; possibly a strange thing to do when the disease seemed to be entirely in the stomach. He was rewarded in finding a mitral regurgitant murmur, which seemed to be in its incipiency, as it occurred just after the first sound of the heart, and was a short, soft, blowing sound. Then only were we able to unravel the peculiar case, and find a cause for the coated tongue, which undoubtedly was obstruction of the portal system, which induced chronic venous congestion of the liver, stomach and intestines. There had been no history of rheumatism, endocarditis, or severe straining from any cause, and it is a mystery to me why this murmur should have occurred at all, for she was so situated that she did not have to work. Possibly it may have come on during her confinement.

Case II.—Mrs. F., aged sixty-six years; mother of six children; has had a chronic bronchitis for years, and for years has had a coated tongue. The coating was most marked in the morning, and it was necessary to brush it hard, when she brushed her teeth, in order to remove it. The appetite was only fair. There was no special gastric symptoms. Physical examination by percussion and palpation showed the left lobe of liver hard and resisting, an enlarged stomach due to dilatation, and a tender spleen. The tongue was heavily coated, especially far back upon the upper and middle portions. It was grayish-green, and of almost leathery consistency; it was slimy and of offensive odor.

In making an examination of the lungs by auscultation, a mitral regurgitant murmur was discovered at the apex of the heart. Upon a more critical examination it was found that the heart was hypertrophied, and that all of the abdominal viscera were the seat of mechanical congestion. The liver was hard and atrophied, the spleen was tender, and the mucous membranes of mouth and tongue were cyanotic to a considerable degree. The disease of the heart was evidently secondary to the disease of the lungs, and the obstruction to the flow of blood through the heart was the cause of the catarrhal condition of the stomach that produced the coating of the tongue by producing the engorgement of the portal circulation.

Case III.—Mrs. B, aged forty-four years, mother of three children, has long been troubled with a coated tongue and offensive breath. Her tongue is never wholly clean; at times the tip and edges are clean but the upper and back portions are furred and heavily covered with a grayish-yellow coat, which looks like a pseudo-membrane. She has been a great sufferer from hemorrhoidal difficulties, uterine congestions, severe headaches, and congestions of lungs, etc. Some fifteen years ago she had pneumonia, and it was intimated that she would soon die of consumption, but she outlived the physicians that gave this unfavorable prognosis. Twelve years ago she suffered from an attack of acute articular rheumatism which was complicated with endocarditis. The disease seemed to expend itself on the mitral orifice, and at present there is a mitral obstructive and a mitral regurgitant murmur, with marked hypertrophy of the heart.

The compensative hypertrophy of the right ventricle ceased long ago, and now secondary dilatation exists, which, as we know, admits of no compensation. The

pulse at times is full and tense, but varies greatly, at times stumbling along, at other times intermitting. Often there are rushes of blood to the head, the carotids are seen to pulsate violently, showing that the heart's action is too active, and that the diseased condition is being strained. Then follows a change, and there is cyanosis of the mucous membrane of the mouth, and the finger-nails are blue. The lungs become the seat of (chronic) congestion, and the pulse grows weak and stumbly. The obstruction to the portal circulation by the embarrassed heart's action has disorganized physiological function and produced chronic venous engorgement of all the abdominal viscera. There is intermittent anasarca of the lower extremities. Anginal attacks have never occurred.

She has undergone operations for hemorrhoids, uterine affections, etc., etc., and yet many, I will not say all, did not discover the organic heart disease that is at the seat of all these ailments and is especially the cause of her coated tongue.

All these cases have been benefited by the use of digitalis, strophanthus, and nux vomica, relieving the more urgent symptoms, while the free use of tonics containing iron and the hypophosphites have improved their general health.

From these cases we learn that organic disease of the heart makes physiological functions pathological conditions, by the interference with the blood in its circulation through the system, especially the portal system; and that many of the affections that are considered simple and of little import, such as chronically coated tongues, and that give no subjective symptoms, are often found to be symptoms of grave organic disease that can be made out on the first examination by the careful physician, if he will make a thorough examination of the case.

Duffield, in *The American Lancet.*

SIR JAMES CRICHTON BROWNE ON SEX IN EDUCATION.—The address which Sir James Crichton-Browne delivered to the members of the Medical Society of London, on the occasion of celebrating the hundred and eighteenth anniversary of the Society on the 2d inst., was one of great interest and extreme importance, for it dealt with a question which must have commanding influence on the destinies of the human race, viz., the extent to which difference in sex should call for difference in education.

Sir James is of opinion that the best way of estimating the difference between the intellects of men and women is to consider and to determine the difference between their bodies. These differences are, he maintains, real and deeply founded in structure, and he selected three points for special elucidation—the actual weight of the brain in the two sexes, the specific gravity of the two chief structures, the gray matter and the white of which it is composed, and the manner in which blood is distributed to its different parts. He showed that the female brain is lighter than that of the male, not only absolutely, but relatively to the respective statures and weights of the two sexes; that the specific gravity of parts of the female brain is less than that of corresponding parts of the male brain; and that the blood supply, which in the male is directed more towards the portions which are concerned in volition, cognition, and ideomotor processes, is in the female more directed towards portions which are mainly concerned in the discharge of sensory functions. These facts lead to the conclusion that the brain of man is an organ broadly distinguished from that of woman, and that each is fitted for its own particular work. By forcing the education of girls in directions formerly reserved more exclusively for males, he admits they have had opened up to them interests and attainments formerly denied them, but he asserts that the benefits and apparent advantages have been attained by serious drawbacks, and that the new spheres of work open to women are apt to involve grave dangers to health, both immediate and prospective, which have not yet been sufficiently appreciated.

In support of his assertion, Sir James brings forward facts which lead to the conclusion that the brains of many school girls are worked in a manner which is good neither for the healthy development of the mental or physical powers. At one girl's school where he had been permitted to make inquiries, he found that out of 187 girls belonging to the upper and middle classes, well-fed and clad and cared for, and ranging from 10 to 17 years of age, as many as 137 complained of headaches, which in 65 instances occurred occasionally, in 48 frequently, and in 24 habitually. He cited the authority of Sir

Richard Owen for the position that children have no business with headaches, and that something must be wrong in the school in which they frequently suffer from them. If, as he believes, girls are frequently engaged until past ten o'clock at night in preparing their school tasks, it is easy to understand that a state of brain strain is induced, which is fatal to normal sleep, and is destructive of breakfast appetite. When a girl is unable to eat a hearty breakfast, Sir James considers that she ought not to be allowed to undertake her school work for that day, and we think most medical men will agree with him. Loss of appetite for one's breakfast is often the first indication of health giving away, and to force girls to hard brain work when the digestive organs have struck, must end in disaster.

Referring to the recent action of the St. Andrew's University in throwing open the classes in arts, science and theology to women, Sir James said he regarded it as a retrograde and mischievous step, for "what was decided amongst the prehistoric protozoa cannot be annulled by Act of Parliament; and the essential difference between male and female cannot be obliterated at a sweep of the pen by any Senatus Academicus." The tall, graceful and lovely English girls whom we meet now and again are, he remarked, the off spring of mothers who were denied the advantages of a "High School" education. It is depressing to think what the next generation of English girls will be like. "I once," he said, "saw a vision that has haunted me ever since. It was a score of sweet girl graduates from a celebrated college standing together in a group on the platform of a provincial railway station, waiting for trains to carry them home at the end of the term. Sweet, they were, I doubt not; most of them carried musical instruments, but they were not, upon the whole—well, not just —'fairest of the fair' to look upon. I am afraid I shall be called ribald and profane, but I should describe them as pantaloon-like girls, for many of them had a stooping gait and withered appearance, shrunk shanks and spectacles on nose. Let us conserve the beauty of our English girls very jealously. I would rather they remained ignorant of logarithms than that they lost a jot of it."

This is a melancholy outlook we admit, but we would fain hope that withered shrunken-shanked girls will always be a poor miserable minority, and be rarely met with except among town dwellers. Those who are responsible for the education of girls will, no doubt, in most cases also provide for the needs of physical development, but even if in the higher circles of society that is neglected, we may be sure that a sufficient number of healthy well-developed women will be found in the lower walks of life, especially in rural districts, to ensure the propagation of the species under as favorable conditions as have ever obtained in the history of the human race. —*Canada Lancet.*

MEDICINE IN FICTION.—We laughed when Mark Twain proposed to deliver a course of lectures upon Chemistry before the Royal Society, adding that he was "in a position to do this with greater freedom, because he knew nothing whatever about the science," but the public do not laugh at, but take in all seriousness, the medical incidents and opinions scattered up and down the pages of the novels and poems which so commonly deal with medical matters. What with the medical books which everybody nowadays feels it his duty to peruse, and the quack advertisements which force themselves upon his attention wherever he turns, it is impossible to avoid collecting a curious amount of medical information of a sort which is certain to find its way sooner or later from the end of the pen of the ready writer. This is perhaps not to be wondered at, considering how large a place ailments and modes of treatment occupy in our thoughts and interests. The freedom with which the novelist discusses these questions is, of course, due to the principle which led to Mark Twain's droll suggestion, though it is not acknowledged with such charming *naïveté*. As every man is expected to be a fool or a physician at forty, a novelist can hardly be blamed for assuming the latter character, and he usually does assume it with startling confidence.

One of the strange medical things in "Monte Cristo" is the way in which the old revolutionist, Noirtier, manages to live on, paralysed in every part of his body except his eyelids, which he winks freely. Yet the old fellow reasons acutely, and finds no difficulty whatever in swallowing food or drink. Dumas seemed absolutely unaware that such a paralytic condition as

he describes in Noirtier's case involved of necessity brain damage of the most serious kind. Elsewhere Dumas made a guillotined head speak and weep. In one of his tales in the volume, "Les mille et un Fantimes," there is a story of a man engaged in making experiments on heads fresh from the guillotine in the Reign of Terror. The doctor is shut up with a sack of fresh heads in a little mortuary chapel, when a voice from one of the heads call him by his name—Albert. "It was the head of Solange, I thought I was going mad. I cried three times, Solange, Solange, Solange! At the third time the eyes opened, looked at me, let two tears fall, and darting forth a dim light as if the soul were escaping, they closed never to open more." Then there was Krook, the "Lord Chancellor," in "Bleak House," who went off the earthly stage by spontaneous combustion. Dickens might well be excused for falling into an error which was at that time commonly believed in by people who ought to know better. Bulwer Lytton went in for medical marvels in "Zamoni," but as he was a student of mystic lore, and actually learned magic from a professed thaumaturgist, the Abbe Constant, his wonders were attributable not so much to his ignorance of medical science as to his belief in the elixir of life and the transmutation of metals.

In "Called Back" we have the blindness and subsequent cure of the hero, and the mental aberration and subsequent recovery of the heroine. There really was some medical knowledge displayed in both these "cases." The peculiar blanching of the heroine's skin after her shock was not at all badly conceived; her partial loss of contact with the outer world was not an ill-contrived symptom, though the facility with which she moved about, and posed like a sane person before her lover, quite lifted her case out of the region of the actual medical world as known to physicians.

It is not surprising that even George Eliot, with all her knowledge of the innermost workings of the human mind, should have lost her way when dealing with the morbid changes of mind and brain. Tito's father, Baldassare, had been a great scholar, but after a long illness his memory, upon recovery, became a perfect blank; he could recall nothing of his scholarship, though he had not forgotten who he was; with all this Baldassare is not represented as having lost his reason; he remembers his past life, but he can no longer read or write or recall any of his scholarship for which he had been so distinguished. It was not amnesia or agraphia with which he was afflicted; it was a form of cerebral disease known only to the eminent novelist.

Wilkie Collins made a specialty of his medical knowledge, and it was upon this account that he was induced to undertake an antivivisection novel, which he published under the name of "Heart and Science." The work was equally unsatisfactory, both to the persons who inspired it and to the general public. The vivisector may be clearly enough conceived in the novelist's mind, and if his laboratory were the only stage on which he acted, the drama of life would be easily dealt with; but the vivisector in the ordinary relations of life—more especially as the family physician—is another character altogether, and cannot readily be made to fit the circumstances necessary to make a good, sensational novel. Wilkie Collins' effort in this direction was a complete failure, and his medical men and his wonderful drugs could never have existed outside his own imagination.

In Dickens' "Tale of Two Cities," where Sydney Carton substitutes himself for the condemned Evremonde, we have premonitions of the chloroform which was to be discovered fifty years later—the chloroform of popular imagination, however, and by no means the $CHCl_3$ of the *Pharmacopœia*.

The poets are, if possible, even worse offenders in the matter of their death scenes than the novelists. A man pulls a 2 drachm phial of some poison from his breast, swallows the contents, proceeds to make a two hundred line speech without a pang or a gasp, staggers gracefully backward to a conveniently-placed seat, drops upon it, clasps the region of the heart with both hands, and dies after a little convulsive movement of the legs. Another is run through the chest with a sword, he falls after some appropriate "business," but he usually raises himself to a sitting posture and makes a speech full of the most beautiful sentiment, sighs deeply, and dies. Heart disease, too, carries off heroines in a fashion quite unknown to doctors, and, although it is of the variety known as "broken heart," has characteristics

which must not be generally associated with fracture of so important an organ.

The matter has its serious aspects, for novels occupy an important position in the literature of the day, and form almost the sole mental pabulum of half the mothers of England, especially amongst the well-to-do classes.

—British Medical Journal.

BRUISES OF INTERNAL ORGANS.—We are familiar enough with bruises of superficial parts, but perhaps less attention than they deserve has been given to bruises of internal organs, for contusions of viscera, although noticed in our works on surgery, receive but little attention in practice, and are perhaps commonly recognized only in their severer forms. Yet it is obvious that bruises of important internal organs must, as a rule, be in their nature and clinical history far more mischievous than the bruises which are so frequently seen in and immediately under the skin. One reason of the comparative neglect of their study is no doubt to be found in the fact that so little attention is usually called to their existence after death. If observed at all, they are passed by with slight notice in the search for injury of a graver nature. Illustrations of simple contusions are very rarely to be met with in our museums—hardly ever, except in conjunction with, and as a part of, some more serious lesion. The absence of such illustrations, which is, I think, to be regretted, is due, in part at least, to the fact that the characteristic appearance is difficult to preserve. Of course, much depends on the color, which rapidly fades on exposure to light. There is in our museum a portion of the left ventricle of the heart of a child, which at present shows very plainly and beautifully two or three small bruises of the muscle. First, let us glance at the nature and clinical history of bruises, and then let us shortly review, in the way only of illustration, without any attempt at a full study, bruises of some of the more important internal organs. Bruises, of course, like almost all injuries, vary widely in degree. In its usual form, bruising means rupture of portions of tissue, including that of the minuter vessels; hence, hemorrhage and extravasation, to which the characteristic stain is due. But one can imagine bruises so slight as to involve little or no rupture; while, when the injury is so severe as to produce visible laceration of texture, the simple bruising of parts becomes merged into the effects of the graver lesion. It would be generally said that you cannot have bruising without laceration—that, in fact, the laceration is an essential part of bruising. Although this may be conceded from a pathological point of view, yet clinically it is of some importance that the distinction should be drawn. In simple bruising there is not necessarily laceration visible to the naked eye—no distinct gap or rent of the injured substance; the rupture of vessels is made apparent only by the ecchymosis. The amount of blood extravasated in bruises, of course, varies widely, and depends not only on the nature and extent of the actual injury, but on the vascularity and dellicacy of the structure which has sustained it. This hemorrage, when copious, often masks the other effects of bruising. Just as when the substance of tissue is largely torn we refer to the rent or laceration, and not to the bruise, so, when there is copious hemorrhage, either in the form of a distinct collection of blood in the injured part, which is called "hæmatoma," or when it escapes into adjacent cavities, we speak and think of this rather than of the injury on which it depends.

I propose now to consider cases of what may be called "simple bruising," in which, although there are necessarily laceration of tissue and extravasation of blood, neither the rent nor the hemorrhage constitutes a prominent feature of the injury, but in which, nevertheless, the damage done is, I venture to think, worthy of more attention than is usually given to it.

Bruises of the brain are, I believe, far more common than is usually supposed, and worthy of much more attention than they have hitherto received. In works on surgery, contusion of the brain obtains a passing notice, and occasionally, as at St. George's Hospital, a specimen to show contusion of the brain is to be found in our museums; but, in practice, it is for the most part included in the more vague and comprehensive condition of concussion. The relation of contusion to concussion of the brain presents some points of great interest. On what happens in a case of concussion pure and simple, we are not perhaps quite clear; certainly, we are not agreed, whether it be due to some sudden and temporary change in the minute vessels in the way of spasm, or whether—which I venture to think is

more probable—it is due to some more subtle and profound molecular disturbance of the brain substance itself. As a matter of fact, we know that cases of simple concussion severe enough to prove fatal, are so very seldom seen, that some even doubt whether they ever actually occur. That, however, concussion of itself, pure and simple, may prove fatal, and that more frequently, when death from injury to the brain is attributed to other causes, it is really due to concussion, I have no doubt, and the facts and arguments for this belief I have given elsewhere. So far, however, as the brain itself is concerned, the chief changes that are associated with severe concussion are contusion or bruising. In the worst instances this is accompanied by laceration of the brain substance and copious hemorrhage, so that the blood collects into a distinct mass, but many cases occur, short of these, in which there is neither visible laceration nor blood-clots, but simply a bruised condition of the cerebral substance, and this, perhaps, in a situation opposite to the part struck. When in such an instance a section of the brain is made, the white or gray matter, as the case may be, exhibits a patch or patches, pink or red from blood-stain; and when these are more minutely examined, especially after water has been allowed to flow freely over the service, numerous minute points or specks of blood appear scattered over the stained area. In these places the substance of the brain shows the effects of bruising. There is here some rupture of substance and some extravasation of blood, but no visible laceration and nothing which would be called hemorrhage. There cannot, I think, be any reasonable doubt that this condition frequently occurs as the result of injury to the head short of any graver effect, and that such cases usually terminate in recovery. Under the head of concussion of the brain, cases are described in which recovery is not rapid and direct, but more prolonged and circuitous, in which the patient passes days and even weeks in a state of partial unconsciousness or constant drowsiness, with sometimes fits of restlessness, from which, perhaps, he may be temporarily aroused, to make short replies to simple questions, but into which he immediately relapses when left to himself. Then, as consciousness is gradually restored, the mind remains in a dull and lethargic state, interference of any kind is often resented and the temper is sometimes strangely altered for the worse. Usually headache, more or less severe, is complained of. But the bodily functions in general in this stage are performed fairly well, and there is no fever or sign of serious disturbance in any other organ than the brain. In such cases, many months often elapse before complete recovery is assured, and during this period its progress is easily interrupted by any attempts to exert the mind. Patients in this state complain that they cannot attend to business; that they are incapable of sustained mental effort; that they have lost the power of self-control; that their senses of sight, hearing, and taste are strangely disordered, and so on. Many such cases, in more recent times, have acquired interest of another kind from the fact that they have been the result of accidents on railways.

Now I am not asserting that such a state as this, even in its more severe forms, may not be the result of what I have called simple concussion, that if the brain could be dissected, any abnormal condition would be always visible; but, seeing how different the effect of injury and the progress of the case are from that of many cases of what may be called simple concussion, even in its severe forms—seeing this, and coupling it with the fact that bruises of the brain are not uncommonly seen when looked for after death from other causes, I think, to say the least, it is reasonable to assume that in such cases as I have alluded to, we have to deal with the effects of contusion beyond those of concussion, pure and simple. To be sure, the treatment of such cases does not turn upon the precise view which is taken of their nature, whether they are regarded, as perhaps they generally are, as cases of mere concussion with unusually slow and irregular recovery; or whether, as it seems to me, they should be regarded as cases of concussion complicated with contusion, from which the patient continues to suffer after the effects of concussion have subsided; on either view the management is practically the same. It is on either view the insistance upon absolute and prolonged rest, with careful nursing—upon absolute rest, not of the mind only, but of the senses of sight and hearing and prolonged not only during the whole period of cerebral disturbance or defect but for at least some time after. The danger of fur-

ther mischief in these cases is, perhaps, not so great in the earlier stages, when the necessity of abstinence from all mental effort is obvious enough, as in the later ones when the patient, feeling himself, while quiet and at rest, to be tolerably well, cannot be persuaded to abstain from such activity as may be productive of mischief. Over and over again one sees patients who, in spite of all precaution, attempt to enter into active life, break down and are compelled to desist by headache, loss of sleep and of appetite, disorder of the senses and strange and startling sensations in various parts of the body. It is well if such strong hints are taken in time, for even the loss of this is in the end made much greater by such premature attempts.

What has been said of bruises of the brain may be applied also in general terms to contusion of the spinal cord. In examinations after death similar appearances to those found in the brain are sometimes seen in the cord—blood-stained patches in the substance of which minute extravasations may be discerned. As with the brains, the effect of such injuries during life is for the most part included in the symptoms of concussions, and little or nothing is said or thought about the bruises which the substance of the cord may have sustained. In modern times such cases are most commonly met with as the result of railway accidents, and have been no doubt described and discussed as cases of concussion. With reference to these important cases in their relation to similar injury of the brain there are two points especially which deserve attention. The symptoms of these injuries, at least the more immediate ones, are less marked in the cord than in the brain. At first there is certainly less pain and usually less local disturbance. There is sometimes tenderness over the particular region of the cord, but this is probably due to injury of the surrounding structures rather than to that of the cord itself, and there is nothing corresponding to the headache, which is often so severe in corresponding injury of the brain. As a consequence such injury is more likely to be overlooked or disregarded in the cord than in the brain, and the needful rest neglected with much greater risk of subsequent mischief. Again, even when the necessity of absolute rest after such an injury is insisted on, it cannot be carried out so fully and completely as in the corresponding cases of many portions of the brain. The functions of the cord cannot, from its nature and endowments, be placed in such complete abeyance as those of the greater portion of the brain. The activity of the vital functions is not so closely connected with what we call the highest nerve centers as they are with those beneath them. As Dr. Marshall Hall long ago put it, the true spinal system never sleeps; and sleep is never more emphatically "nature's sweet restorer" than in such cases as those now under consideration. So that while bruises of the cord are not perhaps, as a rule, more severe than bruises of the brain, there is from these two causes the impossibility of obtaining such complete rest for the cord as for much of the brain, and the neglect of enforcing in the first instance such rest as may be practicable—a far greater risk of more remote mischief of a serious kind after injury of the cord than of the brain. No doubt the wisest practice in all these cases of injury, either of the cord or brain, even when in its early effects it may appear to be trivial, and the patient is disposed to disregard it altogether, it is to insist on immediate and unconditional rest, and as time goes on to relax this only very gradually under careful watching when no symptoms of any further disturbance appear.

How is it that so little attention has been paid to bruises of the lung, or rather, how is that they have been so commonly overlooked? That they not unfrequently occur is, I think, beyond dispute, and yet specimens of the injury are not shown in our museums, nor is it often recognized during life. The injury is caused, of course, by blows on the chest, and is usually associated with fracture of the ribs, especially when due to direct violence, but it may and does occur under certain conditions when the ribs are not fractured. Indeed, such injury may happen, and even laceration, without any visible injury of the chest wall, as, for instance, from the passage of a wheel over it. If at the time of the accident the glottis is closed, the lung is suddenly compressed by the external force against the retained air.

I believe the effects of contusion of the lung are usually confounded with pneumonia. In the severer cases some days after an injury to the chest wall the patient complains of more deep-seated distress; the respiration perhaps becomes quick-

ened; there is hacking cough, and soon rust-colored sputa are expectorated. Then there are dullness, crepitation and other signs of consolidated lung with fluid in the smaller tubes over a limited area. These symptoms are not, I think, usually associated with much dyspnœa or fever and other signs of constitutional disturbance of pneumonia, although I should not insist on this distinction as a marked one. What is more significant during the progress of the case is that the expectoration frequently contains little pellets, or even larger clots of dark blood, which have evidently formed in the smaller tubes as the result of the injury and in time become detached. After this repair and convalescence are usually rapid and uninterrupted. It is perhaps hardly needful to remark that bruising of the lung is not necessarily accompanied by emphysema, or pneumothorax, or even by hæmoptysis; but in some of these cases, as in those of wound or puncture of the lung from broken rib, there is, at the time of the accident, the expectoration of blood-stained frothy mucus; but this does not last, and some days usually elapse before further evidence of damaged lung is revealed. No doubt for the first day or so the signs of injury of the lung are masked by the more impressive effects of broken ribs, and perhaps of injured pleura.

These case for the most part do well, and in subjects otherwise healthy perhaps there is not much to apprehend. It is trite to say that they require care and should never be neglected; in some instances of unsound constitution or of damaged organs the patient is not altogether free from the risk of septic infection. The liver and kidneys are no doubt often bruised, and blood then readily escapes from the vessels of these vascular organs. Examination after death frequently reveals laceration of them, and specimens showing this form of injury may be seen in our museums. This of course almost invariably includes bruising; but cases of simple bruising without distinct laceration unquestionably occur. In the case of the liver during life the diagnosis can only be guessed at, and perhaps it is a wise precaution in doubtful cases to assume its existence. In the case of the kidney the pain is, I fancy, as a rule, more distinct and obvious in that of the liver, and here there is often in addition the significant symptom of blood in the urine. The spleen, too, sometimes suffers in this way, and even the pancreas. A remarkable instance of severe bruising of the pancreas I saw some years ago as the unfortunate result of compression of the abdominal aorta by a tourniquet for the cure of aneurysm of the vessel lower down. After death the large aneurysm was found almost completely filled with quite recent clot, and the pancreas, where it lay across the spine, was terribly bruised. It may be added that during the few hours that the patient survived the operation there were no particluar symptoms that could be directly referred to the damaged pancreas.

Every surgeon is familiar with the difficulty of exact diagnosis in injuries of the abdomen. Severe blows in that region, or more frequently perhaps the passage of the wheel of some vehicle over it, produce profound shock. The patient remains for some time in a state of more or less intense collapse, and the degree and duration of this state is an important element in the diagnosis of any local lesion. In some of these cases the subsequent rapid progress of the patient towards recovery indicates the absence of any considerable local lesion, and then the immediate effect of marked depression on the receipt of the injury we attribute to shock. In other cases the condition of collapse continues, and death rapidly supervenes. In these cases we expect to find some distinct lesion of some important viscus—rupture or complete division of the intestine, for example. Every one knows that even complete division of the whole tube of intestine may be the result of the passage of a wheel across the abdominal wall without any wound or opening in it. There is a third class of cases of great interest and importance, which terminate neither in death nor in rapid recovery. The state of collapse very gradually passes off, but the patient remains pale and depressed. The abdominal wall becomes rigid and remains so, and there is considerably tenderness, either somewhat localized or more generally diffused. The patient lies quietly on his back with the knees raised, and the respiratory action of the diaphragm is limited. The urine is usually passed without any material difficulty, but the bowels do not act. For the rest, the tongue is perhaps rather coated, but the temperature is not much raised, if raised at all, and the pulse

is not quickened. This state will last for several days, or even for a week or two, and end in recovery. Now in these cases there has probably been bruising of important structures. In some of them, perhaps, such mischief may be limited to the abdominal wall, and no doubt in many instances the symptoms and effects may be explained by such injury of the abdominal muscles. In other cases I think we must believe that some portion of the intestinal canal or other structure has been contused and is suffering from the effect. As a matter of fact, we sometimes see this condition when death is caused by other graver injury associated with it, and the occasional supervention of peritonitis confirms this view. The strongest evidence in its favor is furnished by the untoward result of mismanagement. If the patient be not kept at absolute rest for some considerable time, but is allowed to move too soon or too freely; still more, if he be not fed with the greatest care, to the rigid exclusion of all food likely to encourage or compel peristalic action; and worst of all, perhaps, if the routine purge "to clear out the bowels" be administered, the supervention of inflammation in the diastrous form of peritonitis tells its own tale. Hence, the importance in these cases of the most careful nursing and management. In none is there greater need for the observance of unqualified rest, of "rest in its physiological sense," as Hilton put it. And it is hardly necessary to add that the drug of chief value in these cases is opium; not merely, if need be, to relieve the pain and procure sleep, but to reduce as far as practicable the natural action of the intestinal canal. In such cases, for some days at least after the injury—as for some days after an operation for strangulated hernia—we should look upon an action of the bowels as a misfortune, and when at length it may seem prudent to permit it, it should be gently solicited by the use of some very simple enema, as, for instance, by the injection of a few ounces of warm olive oil. Again, it must be obvious that in all cases in which the extent of injury is at all doubtful, it is wisest to keep on the safe side, and to adhere to the line of treatment dictated from the graver point of view.

A word further. It is important to remember that the liability to become bruised from the same degree of injury varies very widely in different persons. While the vessels of some will resist considerable violence, those of others give way under a slight touch, and soon show the discoloration of a bruise; and this, of course, is significant of the state of the structures generally. When the vessels of superficial parts are thus very easily ruptured it indicates a fragility or unsoundness, which in other regions may lead to disastrous consequences. In such cases there are usually other signs of undue degeneration. Persons advanced in life, where perhaps women more frequently than men, and above all those with a preponderance of fat are usually the subjects of this condition. Bruising in these instances has the same significance, and for a similar reason, as epistaxis. When due to an adequate cause, or even to a strictly local condition, it has no grave import; but the case is very different when in advanced life it is provoked by trivial disturbance. Here is a striking case in point. A fat, elderly woman was brought to the hospital on account of some, not severe, accident to one of her legs. I saw her in the admission room, and there was no bruise or any sign of injury on her face. She was carried into one of the wards, and when in half an hour I saw her there I found her with two very "black eyes." Upon seeking an explanation of this I learned that her face had not been struck in any way, but that while being carried up a step or two into the ward she had received a sudden jerk, and this was the only cause to which the ecchymosis could be assigned. This led of course to a further careful examination of her state, and signs of a fatty heart and other symptoms of degeneration were soon revealed. In the course of two or three days she suddenly died. It is familiar knowledge to those who "train" and to many others that as the man gets into "condition" the flesh becomes firmer, and with this the liability to become bruised is very materially diminished. The importance of bearing this state of the tissues in mind in diagnosis and prognosis is obvious enough.—Savory, in *The Lancet.*

A PECULIAR CASE.—Dr. J. W. M., aged fifty-three years; native of Kentucky; family history good; no tuberculous history, or history of any venereal trouble; abstemious habits; jaundice thirty years ago; no sickness since; had

la grippe 1st January, 1891, light form; continued to ride until 1st of February, 1891; exposed to long rides, and to wet, rainy weather; suffered from headache and insomnia four days before going to bed on the 1st of February, 1891.

Prominent Symptoms.—Headache, oppressed breathing, rapid; obstinate constipation, pain along cervical vertebra; obstinate insomnia, lasting twenty-four days and nights continuously; urine, high colored, scanty, loaded with uric acid and the phosphate; no albumen nor sugar on repeated examination, sp. gr., 1010 to 1036 within twelve hours, *i. e.*, examine, say at 12 noon, 1010 at 6 or 7 P. M., as apt to 1036 or 1028; complete loss of appetite, with loathing of food; tongue heavily coated throughout with heavy white fur; pulse, 80 to 100; seldom had any fever, and then temperature never rose over 100° F.; excessive sweating, continuing far into convalescence; melancholic; great muscular prostration; impotence, following apparent recovery for some months; never weighed over one hundred and sixty-five pounds.

Present Condition.—Appetite and digestion good; bowels regular; urine normal, sp. gr. 1020 to 22; some phosphatic deposit, passed often but about normal quantity in twenty-four hours; no albumen or sugar; no impotence; weight, one hundred and eighty-four pounds; pulse, 80 to 85 per minute; breathing bad, oppressed, shallow, frequent, especially on least exertion; clumsy, but no loss of co-ordination; great muscular prostration on least exertion; lungs are all right; heart in normal condition, but weak, and pulse not as full and good as should be; sleeps well; before sickness was fearless among horses, and fond of driving wild, ungovernable ones, now is nervous and apprehensive among them; still somewhat melancholic; talks of dying and about the future state, an unusual foreign subject with him. His treatment was altogether tonic. Phosphorus, in form of die phos. acid entering largely. For the insomnia, all the hypnotics, both ancient and modern, were tried in vain for twenty-four days and nights, and then yielded to large hypodermic injections of morphine sulph. These had to be kept up for so long a time that the habit was formed, but broken up by gradual diminution of dose, until now he has not taken an injection for five or six months, although he is twenty pounds heavier than he ever was, yet the muscular weakness and the dyspnœa is as great as ever, and no prospects that I can see of improvement.

MISCONCEPTIONS AND MISNOMERS REVEALED BY MODERN GASTRIC RESEARCH.[1]—1. The conditions usually called lithæmia, chronic gout and oxaluria, in this country, are in reality almost always forms of toxæmia of gastric origin.

2. That the albuminoid diet, so often advised in these conditions, is frequently harmful and based on a misconception.

3. That toxæmia of gastric origin expresses itself in special symptoms which are sometimes misunderstood. That certain affections of the nervous system, the air-passages and the joints are, amongst others, the result of auto-intoxication.

From his case-book, Dr. Stockton reported a number of instances showing that neurasthenia, vertigo, persistent headache, insomnia, muscular spasm, and epileptiform convulsions, naso-pharyngeal catarrh, laryngitis, tracheo-bronchitis, asthma, Bouchard's nodules, some cases of so-called athritis deformans and other joint troubles, depend upon gastro-intestinal toxæmia. These cases proved manageable by treatment directed to the digestion, as guided by a study of the gastric contents, although in most instances they had long resisted other lines of treatment.

Dr. Musser: I quite agree as to the necessity for local treatment in such cases, but I want to emphasize the necessity of general treatment and general management, also. In my care of such cases I have always been impressed with the efficacy and necessity of general treatment and management, the gastric condition being secondary. All such cases seem to arise from excessive wear and tear; and, whether by local treatment or general management, you must add to their nutrition.

Dr. H. M. Lyman: I wish to say a word as to the importance of considering the general condition of the patient. The etiology of these cases is generally con-

[1] Read by Dr. C. G. Stockton, Buffalo, before the Association of American Physicians; reported in the *Boston Med. and Surg. Jour.*

nected with a history of scrofula or the arthritic diathesis, and it is important to recognize the connection of the local disease with the general substratum. Topical treatment is not, however, rendered any less necessary.

Dr. C. G. Stockton: I do not advocate the treatment of these affections by any special plan of gastric medication or lavage, nor do I forget the importance of the general management of the cases. I wish to insist upon the utmost importance of guiding the general management of these cases upon the findings from the examination of the stomach. Just as our knowledge of certain diseases is improved by examination of the eye and urine, so our knowledge will be improved by examining the contents of the stomach. I think it is a mistake to regard these cases from the general standpoint as much as we have been in the habit of doing. While we should recognize that there is a failure in the nervous system, we should also realize that when the stomach fails, we have toxæmias which give rise to a great variety of evils, and by relieving these toxæmias we relieve our patient.

THE CURE OF INFECTIVE DISEASES.—G. and F. Klemperer, in the *Berliner Klinische Wochenscrhrift*, May 2, treats of this subject in regard to immunity induced subsequent to infection. The value of the immunity depends upon its degree and the rapidity with which it can be established. The most rapid method is by blood serum, as discovered by Behring and Kitasato. In animals the cure of several diseases has already been thus effected.

Every well-marked and acquired immunity is transferable to other animals. The serum treatment is a specific one. The authors have been able to establish immunity in the same rabbit against two separate infections, namely, that of the pneumococcus and that of mouse septicæmia. The difficulty of obtaining the serum must constitute an obstacle to hæmatotherapy, and hence a simpler method of establishing immunity is sought for. This consists in the introduction of an attenuated culture into the veins. By this process the protective substances have still to develop, whereas they are already present in the serum. Thus the immunity conferred by the former method occurs only after a few days, but that by the latter in a few hours. Previous failure by the first method has been due to the feebleness of the immunity induced. The degree of the immunity depends on the amount of the culture introduced. The difficulty lies in concentrating the latter. This the authors have effected by means of the air-pump down to one-tenth of its former volume, and without the application of too great heat. Against the pneumococcus infection some degree of the immunity is present on the following day. In a very virulent pneumococcus infection in rabbits this method does not succeed, but a less virulent infection can be easily cured. Thus, in addition to the serum treatment, a slowly-developing infection in animals can be cured by an immunity subsequently induced by the introduction of an attenuated culture into the veins.

The advantage of this method consists in the readiness with which the remedy may be prepared, the disadvantage in its uselessness against sudden and rapid fatal infection. In man the majority of the infective diseases develop slowly, so that they may permit of this method of treatment.—*Brit. Med. Jour.*

DECADENCE OF SURGICAL ANTISEPSIS IN ENGLAND.—In the *Northwestern Lancet*, the London letter repeats the assertion, that has been made elsewhere, that London surgeons have departed from their first love for antisepsis. The writer was surprised to see the instruments taken from their cases and then dipped in a perfunctory manner in the bath; after which they were used without further precaution. At the London Hospital, another visitor, a Frenchman, at the side of the writer, expressed some surprise, but admitted that he had been told that the English surgeons are no longer the strict observers of surgical cleanliness that they once were, and that Mr. Lister is the least cleanly of them all, in point of fact, the word "dirtiest" was the one employed by the French guest—a forcible expression to say the least.

HAD THIS MAN A VAGINA?—At a meeting held in the French Academy of Medicine on the 19th of April, 1892, Bœckel reported the case of a young man of twenty,

who had a hernia since infancy in the right injuinal region. On the left side he had a testicle of immense size, though on the right none could be felt. After having made an incision on this side, inward through the injuinal canal, an elongated whitish mass was encountered. This was found to consist of an atrophied uterus and fallopian tube, together with several cysts.—*Medicine Moderne*, May 12, 1892.

News and Miscellany.

THE lustrious Sir William Aitken, of Great B tain, died June 25, after forty-four years of most active and distinguished professional life.

AN intrepid writer in the *Medical Examiner* flies in the face of Providence and says that perhaps, far off in the dim future, human beings may be hatched by incubation from the female ovum. His idea is to catch the ovum in some clever manner by means of a new-fangled speculum, and transplant it to an artificial sac containing spermatozoa, and retained in a blood-warm substance which can be supplied with proper nourishment and air during the stage of development. He does not say how he would catch the spermatozoa, but in this manner he hopes to relieve the daughters of Eve from the curse "in sorrow thou shalt bring forth children."—*Doctor's Weekly.*

SIX MONTHS' INTERMENTS.—The following is a report of the interments in this city for the six months commencing December 26, 1891, and ending July 2, 1892, as collected from the weekly reports furnished by the Board of Health. There is also appended a comparison with similar periods in 1890 and 1891. In addition to the deaths from principal diseases there were deaths from the following rare or unusual causes: Carbuncle, 1; chickenpox, 1; elephantiasis, 1; hydrophobia, 2; lightning stroke, 1; rickets, 1; surgical shock, 19; vomiting, 1.

It will be seen that the deaths for the past six months exceeded those of the corresponding period of 1891, 2101, and of 1890, 1334. Deaths of diphtheria show an increase of 399 over those of 1891, and 438 more than in 1890. The deaths of heart disease increased 152 over those of 1891, and 186 over those of 1890. Scarlet fever was more fatal so far this year by 203 cases compared with 1891, and 289 cases compared with 1890. Typhoid fever shows a gratifying falling off in deaths for the past six months of 189 as compared with 1891, and of 106 compared with 1890. Influenza, or la grippe, carried off 318 people this year, against 106 in 1891, and 146 in 1890. Inflammation of the lungs was fatal in 1630 cases, against 1089 in 1891, and 1390 in 1890.

	1892.	1891.	1890.
Interments	13183	11082	11749
Adults	7490	6506	.....
Minors	5693	4576	.....
Males	6702	5568	6007
Females	6481	5414	5742
Boys	3023	2457	2538
Girls	2670	2119	2282
Born in United States	9953	8235	8719
Born in foreign countries	2977	2534	2634
Birthplace unknown	253	313	396
People of colcr	608	486	634
AGES.			
Under 1 year	2653	2339	2576
From 1 to 2 years	762	593	693
From 2 to 5 years	1098	683	724
From 5 to 10 years	622	431	334
From 10 to 15 years	203	190	166
From 15 to 20 years	355	340	335
From 20 to 30 years	1123	1089	1216
From 30 to 40 years	1201	1041	1112
From 40 to 50 years	1017	923	1055
From 50 to 60 years	1080	915	950
From 60 to 70 years	1230	1012	1112
From 70 to 80 years	1119	959	911
From 80 to 90 years	616	488	476
From 90 to 100 years	102	74	83
From 100 to 110 years	2	2	6
PRINCIPAL CAUSES OF DEATH.			
Alcoholism	38	51	43
Apoplexy	350	302	240
Bright's disease	318	255	238
Cancers	287	253	264
Casualties	233	184	182
Cholera infantum	220	207	261
Congestion of the brain	159	154	155
Congestion of the lungs	168	112	147
Consumption of the lungs	1529	1347	1552
Convulsions	504	470	441
Croup	234	199	231
Debility	181	171	265
Drowned	32	47	45
Diphtheria	688	289	250
Disease of the heart	800	648	612
Dropsy	68	62	67
Fever, scarlet	363	160	74
Fever, typhoid	265	454	371
Influenza	318	106	146
Inanition	280	219	252
Inflammation of the brain	345	397	409
Inflammation of the bronchi	420	298	334
Inflammation of the kidneys	161	148	123
Inflammation of the lungs	1630	1098	1390
Inflammation of the stomach and bowels	248	280	344
Marasmus	371	363	367
Old age	508	415	479
Paralysis	193	224	214
Sunstroke	4	8	1
Suicide	48	55	46
Teething	60	54	63
Tumors	57	59	54
Uræmia	117	110	78
Whooping-cough	57	72	71

WEEKLY Report of Interments in Philadelphia, from July 2 to July 9, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Alcoholism	4		Fever, typhoid	3	2
Apoplexy	4		Gangrene, senile	1	
Anæmia	1		Hemorrhage	2	1
Bright's disease	1	2	Indigestion		1
Burns and scalds		2	Inanition		13
Cancer	9		Inflam'n brain	3	12
Child birth	2		" bronchi	1	1
Congestive chill		1	" kidneys	3	2
Casualties	6		" heart	2	2
Congestion of the brain		8	" mouth		2
Congestion of the lungs	1		" lungs	2	9
Congestion of the bowels		1	" pericard'm	2	
Congestion of the liver		1	" peritone'm	3	2
Cholera infantum		97	" joints	1	
" morbus	2	3	" s. & bowels	8	18
Cirrhosis of the liver	1		" uterus	1	
Consumption of the lungs	40	7	" nerves	1	
Convulsions		16	Intussusception		2
" puerperal	2	1	Marasmus		20
Croup		3	Neuralgia of the heart		1
Cyanosis		3	Old age	9	
Debility	6	5	Paralysis	15	
Diarrhœa		4	Poisoning, opium	1	
Diphtheria		15	Pyæmia	1	
Disease of the heart	18	3	Rheumatism		1
Disease of the kidneys	1		Scrofula		1
Disease of the liver	3		Septicæmia	2	
Drowned	2		Softening of the brain	2	
Dropsy	3	1	Suicide	2	
Dysentery	4	2	Syphilis		1
Effusion of the brain		1	Tabes mesenterica		1
Epilepsy	2		Teething		3
Erysipelas		1	Tetanus	1	
Enlargement of the heart	1		Ulceration of the bowels	1	
Fever, scarlet		7	Uræmia	5	
			Whooping-cough		6
			Total	185	285

ARMY, NAVY AND MARINE HOSPITAL SERVICE.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from June 25 to July 11, 1892.

Lieutenant Colonel William [illegible] Wolverton, Assistant Medical Purveyor, will, on the expiration of his present leave of absence, proceed to Fort Omaha, Nebraska, and report in person to the commanding officer of that post for temporary duty during the absence of Major Albert Hathruff, Surgeon, on leave.

First Lieutenant Isaac P. Ware, Assistant-Surgeon, U. S. Army, is relieved from duty at Fort Douglas, Utah, and will report in person to the commanding officer at Fort Logan, Colorado, for duty at that post, relieving Captain Wm. L. Kneedler, Assistant-Surgeon, U. S. Army.

Captain Kneedler, on being relieved, will report in person to the commanding officer Fort Mason, Cal., for duty at that station, relieving Captain Harry O. Perley, Assistant-Surgeon.

Captain Harry O. Perley, Assistant-Surgeon, on being relieved from duty at Fort Mason, California, will repair to Washington, D. C., and report in person to the Surgeon-General, U. S. Army, for duty in his office.

Captain William H. Corbusier, Assistant-Surgeon, U. S. Army, will proceed, at the proper time, to Island Lake, Michigan, and visit the camp of the Michigan State Troops during the period of the encampment at that place, commencing August 18, 1892.

The leave of absence granted Captain Henry S. T. Harris, Assistant-Surgeon, U. S. Army, is further extended one month.

Captain William Stevenson, Assistant-Surgeon, U. S. Army, will visit the camp of the Illinois National Guard at Springfield, Illinois, during the period of its encampment, commencing July 9 and ending August 21, 1892.

Leave of absence for one month, with permission to apply for an extension of one month, is granted Captain William O. Owen, Jr., Assistant-Surgeon, U. S. Army.

First Lieutenant Frank P. Meriwether, Assistant-Surgeon, U. S. Army, now on duty at Fort Adams, Rhode Island, will report in person to the commanding officer Madison Barracks, N. Y., for temporary duty at that post during the absence of Captain Henry S. Turrill, Assistant-Surgeon, U. S. Army.

First Lieutenant Charles F. Mason, Assistant-Surgeon, U. S. Army, on being relieved by Captain Raymond, will report in person to the commanding officer Fort Snelling, Minn., for duty at that post.

By direction of the Secretary of War, First Lieutenant Champe C. McCulloch, Jr., Assistant-Surgeon, U. S. Army, now on duty at Fort Sam Houston, Texas, will report in person to the commanding officer Fort Hancock, Texas, on July 1, 1892, for temporary duty at that post.

Captain Edward Everts, Assistant-Surgeon, U. S. Army, is relieved from duty at David's Island, N. Y, and will report in person to the commanding officer Fort Robinson, Neb., for duty at that post, relieving Captain Henry T Raymond, Assistant-Surgeon, U. S. Army.

Captain Raymond, on being relieved by Captain Everts, will report in person to the commanding officer Fort Washakie, Wyoming, for duty at that post, relieving First Lieutenant Charles F. Mason, Assistant-Surgeon, U. S. Army.

Leave of absence for one month, with permission to apply for an extension of one month, is granted Colonel Charles Page, Assistant-Surgeon General, U. S. Army.

In addition to his other duties Major J. V. D. Middleton, Surgeon, U. S. Army, will take charge of the office and perform the duties of the Medical Director, Department of the East, during the absence on leave of Colonel Page, Medical Director.